The Nature Tech Revolution:

The Tools to Move from ‘Do No Harm’ to ‘Nature-Positive’

October 2024

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Foreword: A new era for nature tech

A new era for nature tech

As the eyes of the world turn to Cali, Colombia, for the UN Biodiversity Conference, COP16, it is increasingly clear that companies are prioritizing biodiversity and combating the growing nature crisis. The scale of the crisis has become evident: global biodiversity loss is accelerating at unprecedented rates.

According to the Stockholm Resilience Centre's 2023 Planetary Boundaries study, the current rate of species extinction is tens to a hundred times higher than the average over the last ten million years.[1] These extraordinary losses threaten ecosystems, economies - and (they are now realizing) companies directly.

For many years, companies have been conducting environmental impact assessments, identifying the presence of threatened and endangered species, and managing air and water pollution. Despite these efforts, biodiversity loss continues to increase and simply minimizing harm is no longer enough. The time has come for businesses to shift from reducing their environmental footprint to actively advancing net benefits to nature throughout their operations, supply chains, and products.

Companies must step up not just to be 'good corporate citizens' but because it is increasingly clear that the continued success of their business depends on it.

Two years ago, the Chief Sustainability Officer (CSO) of a global bank embarked on their nature journey, assuming it would follow the same path as tackling carbon. After all, if they could gain C-suite buy-in for decarbonization and address investors' demands on stranded fossil fuel assets, how difficult could bugs and bunnies be?

A year in, the complexity of the task became evident. The breadth of issues, depth of business impact, and location-specific differences across their asset portfolio - exacerbated by seemingly infinite data sets - made the challenge feel overwhelming.

According to recent interviews with leading companies, this CSO's experience is far from unique. Many are only beginning to grasp the magnitude of the biodiversity crisis and are turning to new data providers and technologies for solutions.

In mid-2024 the members of the NatureTech Alliance—ERM, Salesforce, Planet, and NatureMetrics—assessed the current state of corporate biodiversity measurement, management, and disclosure through interviews with 18 leading companies. All of them are global corporations that are the 'end-users' of nature data, rather than technology providers looking for new markets (which are being well covered by excellent reports by Nature 4 Climate and others).

This white paper results from that collaboration. It outlines key pathways for businesses as they navigate new frameworks like the Taskforce on Nature-related Financial Disclosures (TNFD), Corporate Sustainability Reporting Directive (CSRD), and European Union Deforestation Regulation (EUDR) – all while addressing the pressing and practical challenges of biodiversity loss, water scarcity, and climate change.

As technology and demand converge for nature-related insight, today's data desert will surge into a torrential deluge.

Change is coming and it is coming much faster than it did with carbon reporting. We are about to enter a new era where there is a huge proliferation of nature data enabled by the latest innovations and applications in satellite, AI, cloud, and eDNA.

The NatureTech Alliance is here to support corporates before the deluge to convert this new flow of data into actionable decisions to drive sustainable growth.

Matt Haddon
Global Leader
Biodiversity, Water & Nature
ERM

Executive summary

Executive summary

In January 2024, ERM, Salesforce, Planet, and NatureMetrics launched the NatureTech Alliance at the World Economic Forum in Davos to help companies harness advanced data and technology to tackle their most urgent nature challenges.

The Alliance's overall aim is to develop an integrated toolkit focusing on:

- Providing visibility into nature impacts, dependencies, and risks and opportunities
- Effectively managing nature-related data and reporting
- Shifting corporate nature strategy from commitments to nature-positive outcomes
- Navigating nascent and complex regulatory landscapes
- Driving cross-value chain and cross-sector collaboration
- Directing private capital flows towards high-impact, nature-positive activities

After multiple client conversations, it became clear that many companies are still getting their heads around the challenge. So the Alliance set out to better understand the common nature-related challenges companies face across their value chains - and how they are using data and technology to solve them.

Through a series of interviews with leading players, the Alliance identified significant challenges and examples of successful actions to manage them and create business value. Seven critical insights emerged, painting a clear picture of the current obstacles and opportunities for effective corporate nature action.

7

Critical insights on corporate nature action - preparing for the data deluge

Source: PlanetScope

1

Nature risk is both global and highly local

Nature-related risks, such as water scarcity, biodiversity loss, or deforestation, vary greatly by location, but companies and financial institutions often rely on coarse global data that fails to capture local nuances. Companies may rely on aggregated global biodiversity or water stress indices, which overlook critical local factors such as regional ecosystem dynamics or community-level water usage. This mismatch can lead to blind spots in risk management, resulting in poor decision-making, operational disruptions, or even regulatory non-compliance.

"A global water stress tool (such as the World Resource Institute's Aqueduct tool) indicates water stress in a region, however, local data shows the specific water source we are interested in is not stressed. While just one example, it illustrates the complexities of applying broad metrics to local situations"

– Dundee Precious Metals

2

The link between nature risk and enterprise risk is still under-developed

Many companies struggle to integrate nature-related risks into broader sustainability strategies and enterprise risk frameworks. Nature is often treated separately from climate change, despite their deep interdependencies. Deforestation, for example, not only drives biodiversity loss and threatens water supplies but also worsens climate change by releasing stored carbon. Integrating nature-related data into strategic planning, risk management, and financial forecasting is critical for improving resilience and maintaining commercial performance.

"As a bank, we need to be actively monitoring and understanding our nature-related risks and how they are evolving, as this directly impacts our portfolio. When managing these risks, it's crucial to understand the appropriate mitigation strategies."

— Multinational bank

3

Lack of corporate decision-maker and investor understanding hinders nature-positive growth

Despite growing interest in sustainability in general, many corporate decision-makers and investors struggle to grasp complex nature-related data. This gap between scientific insight and corporate and investment intelligence slows the adoption of nature-positive strategies. Companies and investors need better tools to communicate nature-related risks and opportunities in ways that resonate with stakeholders.

"Having access to reliable technologies that would allow investors to accurately monitor and promote best practices through communication with farmers and landowners can inform investment decision-making, ensure data consistency across portfolio companies, and improve reporting quality."

— Clarmondial

4

Companies are moving from “do no harm” to “net positive”

There is a noticeable shift from companies aiming to mitigate their negative nature-related impacts (e.g., reducing deforestation, using fewer agrochemicals) to embracing net-positive strategies (e.g., biodiversity restoration, reforestation). It is no longer enough to avoid harming nature—companies are also increasingly expected to restore ecosystems and contribute positively. Yet many companies have only piloted these efforts, hindered by challenges such as site-level data availability and the complexity of measuring and managing nature-related outcomes and impacts across global operations.

“Many investors are shifting our investment focus from ‘do no harm’ to ‘nature-positive’ practices by investing in companies that are actively restoring natural landscapes.”

— Just Climate

5

Financial institutions are lagging behind other sectors but have the potential to scale nature-positive investments

Financial institutions are lagging behind sectors such as food and agriculture and extractives in integrating nature-related data into their decision-making processes. However, they are increasingly waking up to nature-related risks, such as biodiversity loss, ecosystem degradation, soil erosion, and invasive species.

As financial services companies become more proficient in understanding and incorporating these risks, their significant influence of capital flows will start to show.

Their ability to request comparable disclosures, such as biodiversity risk metrics or ecosystem service valuations, will extract due diligence for decision-making and position them to drive the standardization of nature-related data reporting. By pushing for disclosures that go beyond regulatory requirements, financial institutions are beginning to play a key role in accelerating nature-positive investments across industries.

“Nature-related financial disclosures are on track to become a corporate requirement. This has the potential to drive further investments into nature-related assets as a means of mitigating corporate impacts and dependencies on nature. Voluntary corporate target setting on nature and biodiversity may also prove to be an additional driver.”

— Anew Climate

Source: PlanetScope

6

Outcome-based metrics are the future, but few have figured it out

Companies are moving from practice-based metrics, focused on inputs like reduced fertilizer use, to outcome-based metrics that measure real-world results for biodiversity and ecosystem health. This shift is essential because outcome-based metrics provide clearer insights into actual environmental impact, such as species diversity or soil health. Such metrics can also clearly connect company actions with nature-positive outcomes and the business values they yield.

Scaling this transition is difficult due to the complexity of measuring biodiversity, the lack of standardized methodologies, and challenges in collecting reliable data. Companies are beginning to address these hurdles by using technologies like remote sensing and eDNA, and collaborating with experts to better track and report outcomes across their operations and supply chains.

"We recognize that improving practices on individual farms and not looking at the bigger picture will not always lead to the outcomes we and our stakeholders want for nature. Often we need to think beyond the boundaries of the farm and beyond improved practices to measuring tangible outcomes."

— Nestlé

7

Data fragmentation is the biggest barrier, not a lack of technology alone

While advanced technologies like AI, remote sensing, and geospatial platforms are available, companies face significant challenges in managing fragmented and inconsistent nature-related data. Many organizations already collect site-level data through impact assessment or environmental compliance monitoring, but integrating these localized datasets with other data sources—across supply chains, portfolios, use cases, and geographies—remains a major hurdle.

This fragmentation is often a bigger barrier than the availability of tools to evaluate the data. Companies that rely heavily on external data sources may encounter gaps in data quality and relevance which can slow or misdirect their progress towards nature-positive outcomes. A very few leading companies are beginning to apply advanced technologies and platforms to address this challenge, standardizing and translating disparate nature-related datasets into enterprise-wide insights for risk management and reporting.

As nature data start to proliferate through new technologies like satellite, cloud, and eDNA, companies must prepare to channel and harness a data deluge.

"The nature-related data we already capture is too vast and does not serve a consistent purpose. We would like to be able to pull the same type of data from every farm to ensure the accuracy of our overall reporting, but this is complicated by the fact that the farms we use can often change year to year. We would be interested in technologies that would help us consistently capture data."

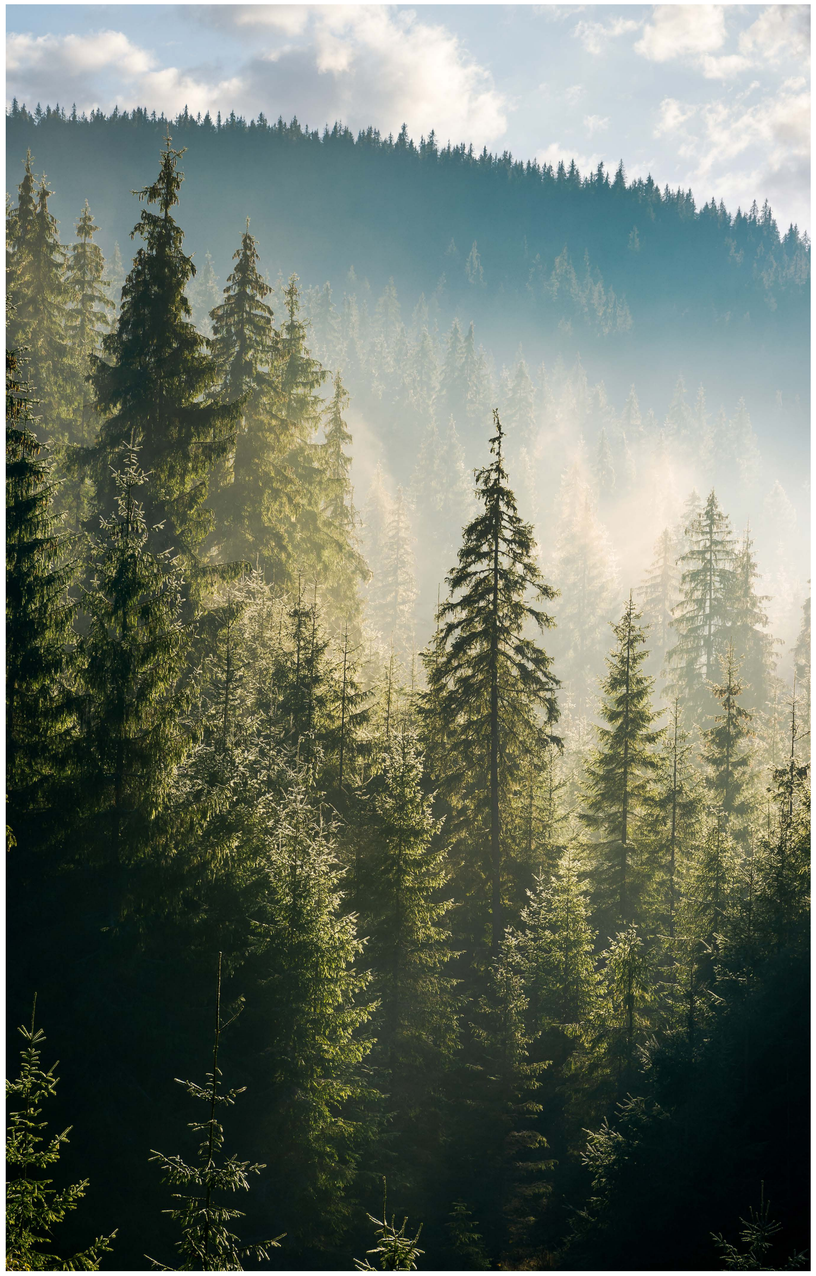
— Multinational retailer

Source: PlanetScope

Towards a common vision

Responding to these critical insights, we propose a common vision for how to harness the power of nature technologies to solve these challenges. At its foundation is a performance framework that outlines how companies can advance from a focus on minimum compliance to more innovative, outcome-based strategy (see Infographic 2).

- **Unified data and reporting platforms for nature and biodiversity:** Companies require integrated data platforms for consolidating internal and external data on nature-related risks and opportunities. A centralized dashboard will help companies overcome a previously fragmented and inconsistent data landscape that has limited action.
- **Outcome-based metrics and predictive analytics:** Companies must shift from practice-based metrics (e.g., progress against a target or certification) to outcome-based metrics. Making this change will enable companies to move from a reactive compliance mindset to one focused on proactive nature-positive growth.
- **Cross-sector, multi-stakeholder collaboration on solutions:** A cooperative environment in which companies, governments, NGOs, and investors exchange data, learnings, and innovations to address landscape-level nature-related risks is key to driving the collective action required to restore ecosystems.
- **Scalable and cost-effective nature-positive investments:** Nature-positive investments must be profitable, scalable, and conventional in order to move beyond traditional philanthropic and government-backed nature-related funding. Doing so will require incentives and market instruments that generate capital flows, particularly in land-use-intensive sectors.
- **Intuitive and accessible tools for all stakeholders:** Convenient tools that enable non-expert users to easily adopt, understand, manage, and report on nature-related information. These tools must incorporate accurate, up-to-date, and verifiable data from local to global sources to mitigate data fragmentation and ensure decision-maker understanding.
- **Regulatory-ready solutions with built-in compliance:** Companies need a comprehensive nature-related reporting system aligned with emerging disclosure initiatives and existing regulations. By streamlining reporting, this system will help companies stay ahead of evolving regulatory requirements and better link nature risk to enterprise risk.
- **Companies shift from “do no harm” to “nature-positive”:** Companies are moving from mitigating harm to actively contributing to nature-positive outcomes. Realizing this vision requires improved approaches for assessing outcomes and demonstrating their financial value.



Introduction

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Introduction

Companies are increasingly prioritizing biodiversity and nature-related issues as the world turns its focus to combating the growing crisis driven by human impact on the environment. Over 45,000 species (or 28 percent of all assessed species) are currently threatened with extinction, according to the International Union for Conservation of Nature.[2]

Since 1970, there has been a 73 percent decrease in the average abundance of wildlife populations, with freshwater species hit the hardest, declining by an average of 85 percent.[3] Regional declines have been the most pronounced in Latin America and the Caribbean.

Habitat loss is a primary driver of this decline. Humans have altered 70 percent of Earth's land from its natural state, according to the United Nations Convention to Combat Desertification.[4] Much of this alteration is occurring in the world's most biodiverse ecosystems. Tropical forests, home to 80 percent of known species, lost 3.7 million hectares of primary forest in 2023 alone, threatening the existence of countless species.[5]

The world is also rapidly pushing past the nine 'Planetary Boundaries' first defined by Johan Rockström and 28 distinguished scientists in 2009. The latest research in this work, published in September 2024, found that six of the nine Planetary Boundaries have passed their safe operating spaces (e.g., "an Earth system state that allows humanity to develop and thrive for generations to come").[6] Change in Biosphere Integrity is one of the six (see Infographic 1), with integrity decreases raising concerns that nature is losing resilience, adaptability, and capacity to mitigate pressures on all nine boundaries.

As Rockström himself put it at Climate Week NYC this year, when you realize that nature is both a source of ecosystem services and a buffer against environmental degradation, the crisis is truly stark.

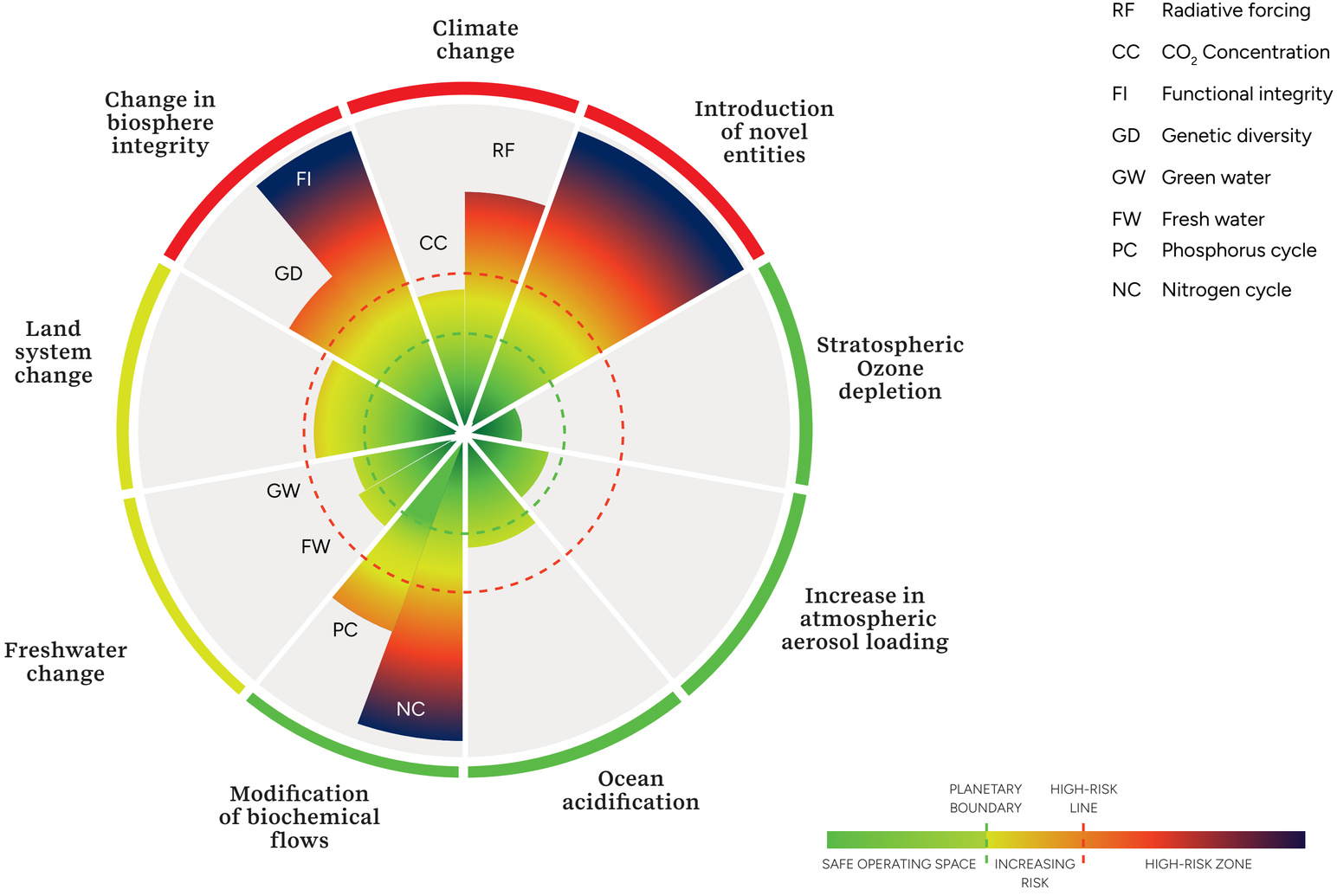
Acknowledging this grim picture, companies are beginning to respond to these challenges. A World Economic Forum (WEF) report finds that over half of the world's total GDP is moderately or highly dependent on nature.[7] This reliance is not just a risk but also an opportunity—another WEF report projects up to $10 trillion in annual business opportunities related to nature-related action by 2030.[8]

"[There is] a need for companies to shift focus from just assessing nature-related risks to actively understanding and mitigating their nature-related impacts."

— Kinross Gold

The emergence of mandatory and voluntary nature-related disclosure frameworks is driving further corporate action (see Table 1). The Taskforce on Nature-related Disclosure (TNFD), for example, has issued 14 recommended disclosures and 15 core disclosure metrics.[9]

Infographic 1: The nine planetary boundaries



Key

RF	Radiative forcing
CC	CO_2 Concentration
FI	Functional integrity
GD	Genetic diversity
GW	Green water
FW	Fresh water
PC	Phosphorus cycle
NC	Nitrogen cycle

The current state of the nine planetary boundaries as defined by Planetary Boundaries Science's 2024 Planetary Health Check report.

Navigating this complex landscape is challenging. Regulations vary across regions, and the sheer amount of required information adds complexity, increasing operational costs and reputational risk if companies fail to meet expectations. Smaller organizations may struggle with resourcing the workload with adequate expertise.

"One of the biggest nature-related challenges for banks is accessing and assessing clients' asset-level data. If we do not have complete data here, then our assessment of the client might not paint a full picture. Currently, much of this data is missing in the market."

— Multinational Bank

Table 1: Select nature-related disclosure regulations and frameworks

Framework	Compliance Type	Scope	Key considerations
Corporate Sustainability Reporting Directive (CSRD)	Mandatory	EU companies, all sectors Non-EU companies with "significant activities" in the EU, all sectors	• Number (and area) of sites in/near biodiversity-sensitive areas with negative impacts • Flexibility in relevant metrics, with recommendations
Corporate Sustainability Due Diligence Directive (CSDDD)	Mandatory	EU companies that meet thresholds for employees and EU turnover, all sectors Non-EU companies that meet thresholds for EU turnover, all sectors	• Sets minimum requirements for companies to develop and apply due diligence measures to identify and address adverse human rights and environmental impacts
European Union Deforestation Regulation (EUDR)	Mandatory	EU, all sectors	• Confirmation that seven commodities (i.e., cattle, wood, cocoa, soy, palm oil, coffee, rubber) and some of their derived products entering the EU are not associated with deforestation and forest degradation
GRI 101: Biodiversity 2024	Voluntary (unless required by a local jurisdiction)	Global, all sectors	• Eight disclosure types, including how organizations manage and report biodiversity-related impacts: - Metrics on biodiversity impact drivers - Flexibility to choose metrics for other nature impacts - Impacts throughout supply chain - Requires only most significant biodiversity impacts - Location-specific information on impacts - Stakeholder engagement - Biodiversity policies and applying the mitigation hierarchy

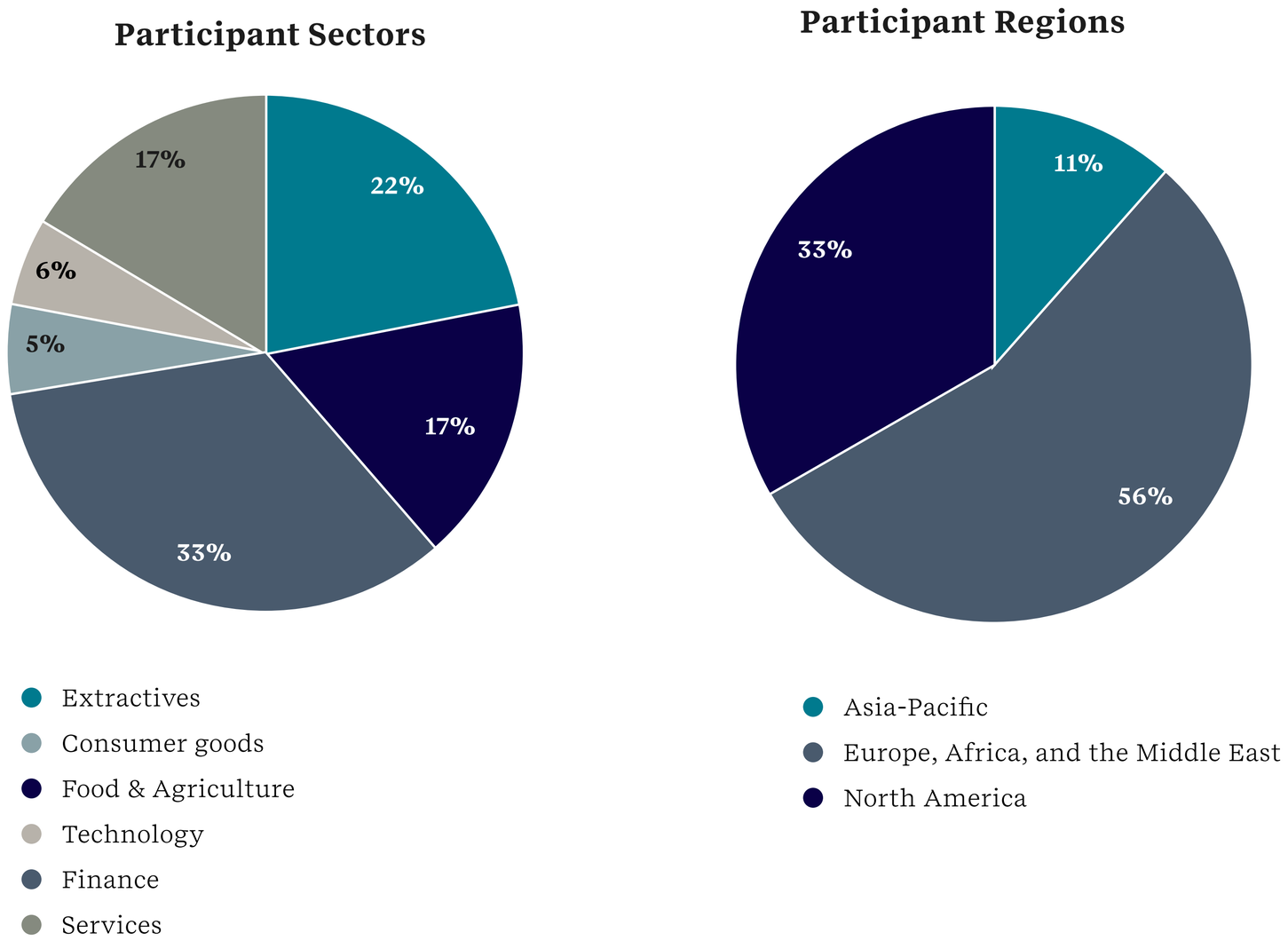
Framework	Compliance Type	Scope	Key considerations	
International Finance Corporation (IFC) Performance Standard 6	Mandatory	Global, all sectors	• Focus on biodiversity and ecosystem services impacts • Site-specific information on species, ecosystems, and data quality • Applies to projects in modified, natural, and critical habitats that may impact biodiversity and/or ecosystem services	• No Net Loss for natural habitats and Net Gain for critical habitats • Critical Habitat Assessment, Mitigation Design, Offset Design, and Protected Area assessment • Monitoring and Evaluation Design
Forest, Land and Agriculture (FLAG) Guidance, Science-Based Targets Initiative (SBTI)	Voluntary	Global, Forest, Land, and Agriculture sectors	• Outlines guidance for companies to set science-based targets for land-related emissions reductions in line with limiting global warming to 1.5°C	
Science-Based Targets Network (SBTN)	Voluntary	Global, all sectors	• Nature-related impacts only (land and freshwater use and impacts) • Five-step process to set targets for nature	• Emphasizes using location and spatial data to set effective targets for managing context-specific impacts
Sustainable Finance Disclosures Regulation (SFDR)	Mandatory	EU financial institutions Non-EU financial institutions conducting business in the EU	• Investments in companies that do not monitor / control pressures on biodiversity and ecosystem change • Investments in companies that impact protected species	• Investments in companies with sites (owned, leased, managed) in, or near, areas of biodiversity importance
Taskforce on Nature-related Financial Disclosure (TNFD)	Voluntary (unless required by a local jurisdiction)	Global companies, all sectors	• LEAP Process • Disclosure on Governance, Strategy, Risk, and Impact Assessment, and Targets & Metrics	• Fourteen core disclosure metrics • Additional sector and biome-specific metrics • Additional metrics for relevant material issues

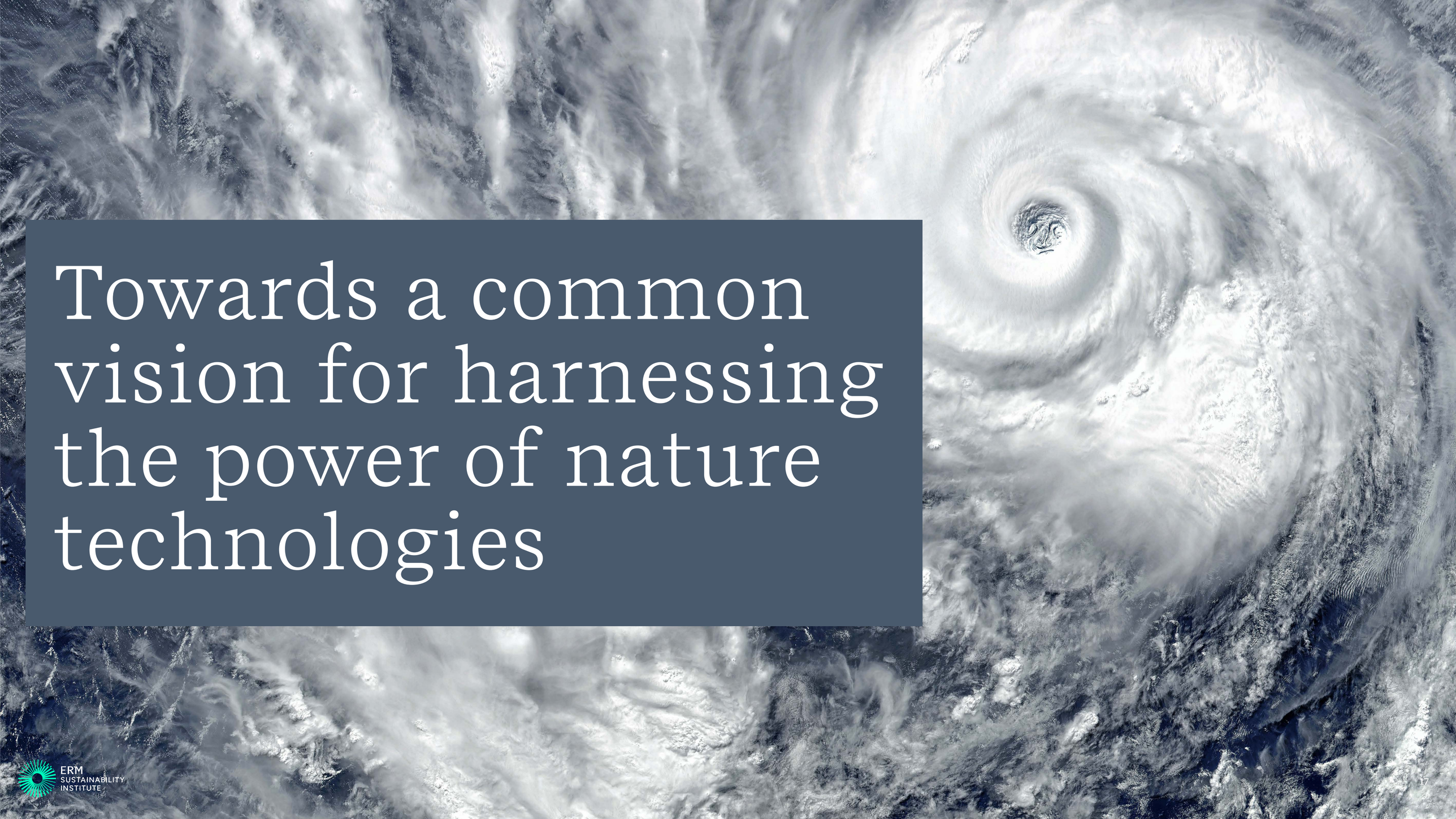
In this evolving landscape, the ability to collect, manage, and analyze nature-related data is more important than ever. ERM, Salesforce, Planet, and NatureMetrics formed the NatureTech Alliance (Alliance) to help companies tap the most advanced data and technology to address these challenges.

In 2024, the Alliance conducted in-depth, structured interviews with 18 leading companies to understand how they currently use data and technology to address their nature-related challenges and what they expect in the future. These insights, alongside the expertise contributed by Alliance members, inform this white paper. The resulting insights also underpin a new, integrated toolkit the Alliance is developing for companies on their journey along a nature performance framework from 'do no harm' to nature-positive outcomes. The toolkit is focused on:

- Providing visibility into nature impacts, dependencies, and risks and opportunities.
- Effectively managing nature-related data and reporting.
- Shifting corporate nature strategy from commitments to nature-positive outcomes.
- Navigating complex and still nascent regulatory landscapes.
- Driving cross-value chain and cross-sector collaboration.
- Directing private capital flows towards high-impact, nature-positive activities.

Figure 1: Regional and sector breakdowns of interviewed companies





Towards a common vision for harnessing the power of nature technologies

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Towards a common vision

The 18 companies interviewed reinforced the vision that the Alliance is seeing emerge: the future for tech lies in putting corporate nature action at the center of genuinely material business decision making.

Put simply, preparing for the coming flood of nature-related information that new technologies will bring, turning data deserts in deluges. One, Anew Climate, captured it well: “We would prefer to see a platform that provides corporate nature intelligence as opposed to scientific data that fails to connect the business case for investment.”

These interviews, experience of the Alliance members, and market study revealed a wide range of preparedness and performance on nature-related issues across companies and sectors. These insights form the basis of a performance framework (Infographic 2) that illustrates how companies are evolving from compliance-driven approaches to more innovative, outcome-based measurements and actions. These stages should be seen as a continuum with companies taking simultaneous action as they progress their nature-related data and decision-making journeys.

As companies shift from ‘do no harm’ to nature-positive measurement and action, they will need to be empowered by integrated nature data and reporting platforms that cross sustainability pillars and enterprise strategies. Such platform approaches will provide accessible, easy-to-use tools in decision-making roles because they draw on real-time data and embed predictive analysis with outcome-based metrics.

Early on in the nature performance journey, companies would count on tools with regulatory-ready reporting modules and standard, shareable formats. These will ensure scalable and cost-effective nature-positive investments are understood, feasible, and incentivized. The result would be thoughtful, transparent, and aligned decision making across enterprises and investors, resulting in meaningful collective investments in high-impact nature-positive activities.

Below, we unpick this vision for the future of nature technologies and the features essential to realizing it.

Infographic 2: Evolution is a process: Our nature performance framework

1. Early Starter

CHARACTERISTICS:

- **Compliance -Driven Focus**
- **Basic Reporting**

TECHNOLOGIES USED:

- **Spreadsheets and Manual Data Entry:** Data collection and analysis are mostly manual, with spreadsheets the primary tool for tracking nature-related data.
- **Basic Nature Monitoring Tools:** Technologies like camera traps lack comprehensive application.
- **Minimal Use of Advanced Technologies:** Companies have limited or no use of advanced technologies such as AI.

2. Developing Stage

CHARACTERISTICS:

- **Incremental Integration of Nature and Biodiversity**
- **Sectoral Focus**

TECHNOLOGIES USED:

- **AI, Remote Sensing, and GIS (Pilot Phase):** Begin to pilot advanced technologies like AI, remote sensing, and GIS to collect and analyze nature data.
- **Sector-Specific Data Platforms:** Use platforms tailored to specific areas, such as sustainability-linked loans or carbon credits, to improve data collection in targeted areas of the business.
- **Growing Technology Integration:** Not yet fully standardized or scaled, and remains inconsistent across different portfolios.

3. Advanced Performer

CHARACTERISTICS:

- **Proactive and Strategic Integration**
- **Widespread Technology Adoption**
- **Comprehensive and Transparent Reporting**
- **Cross-Sector and Regional Collaboration**

TECHNOLOGIES USED:

- **Widespread Use of AI, Remote Sensing, and Geospatial Platforms:** Actively used across multiple regions, supply chains, and sectors - enabling more comprehensive nature-related monitoring and management.
- **Predictive Analytics for Risk Management:** Begin applying predictive analytics to model nature-related risks and forecast potential impacts, further integrating nature-related data into core business strategies.

4. Leading Player

CHARACTERISTICS:

- **Holistic and Innovative Integration**
- **Global and Landscape-Level Collaboration**

TECHNOLOGIES USED:

- **AI-Driven Predictive Modeling at Scale:** Companies lead in the use of AI-driven models to predict biodiversity changes and assess ecosystem impacts. The models are applied across all business.
- **Blockchain for Supply Chain Traceability:** Cutting-edge use of blockchain technology ensures transparency and traceability.

Unified data and reporting platforms for nature and biodiversity

Vision: Companies need an integrated, centralized data platform to consolidate internal- and external- data on nature-related risks and opportunities. A dashboard with advanced data and analytics helps companies move beyond fragmented and inconsistent datasets, enabling efficient management and analysis of nature-related data across business functions, assets, and supply chains. An integrated, standardized approach can also address the challenges of communication with decision-makers and investors, incorporate outcomes-based metrics attributed to key business decisions, and track nature-positive risks and results enterprise-wide.

"We have not identified a one-stop shop solution for accessing nature-related data that fulfils all our needs. To date, we've had to access asset-specific data from different providers and stitch them together, which is a very complex and time consuming process."

— Barclays

Key features needed to realize this vision:

- Integration of diverse internal and external data sources (e.g., remote sensing, geospatial, and supplier-provided data) into a centralized platform serving as the sole source of truth for a company's nature-related risk assessment and initiatives.
- Clear division of responsibility for data collection, management, and analysis across business functions (e.g., operations for direct data, procurement for upstream data, and customer service for downstream).
- AI-driven tools to clean, aggregate, and synthesize data across regions and functions, making it actionable for decision-makers.
- Real-time nature-related data-processing connects actions to outcomes, allowing companies to conduct dynamic risk assessments and nature-positive analyses with up-to-date insights.

"AI could revolutionize how we assess site areas within the built environment by analyzing land features—identifying, for instance, 50 percent grassland and 10 percent woodland—and quickly generating data on habitat requirements. By drawing polygons and overlaying them with natural land maps, AI can assess deforestation risk and compare it with species abundance and other ecological datasets, streamlining environmental assessments and decision-making."

— Multinational consumer goods firm

CREATING A UNIFIED DATA PLATFORM WITH MULESOFT

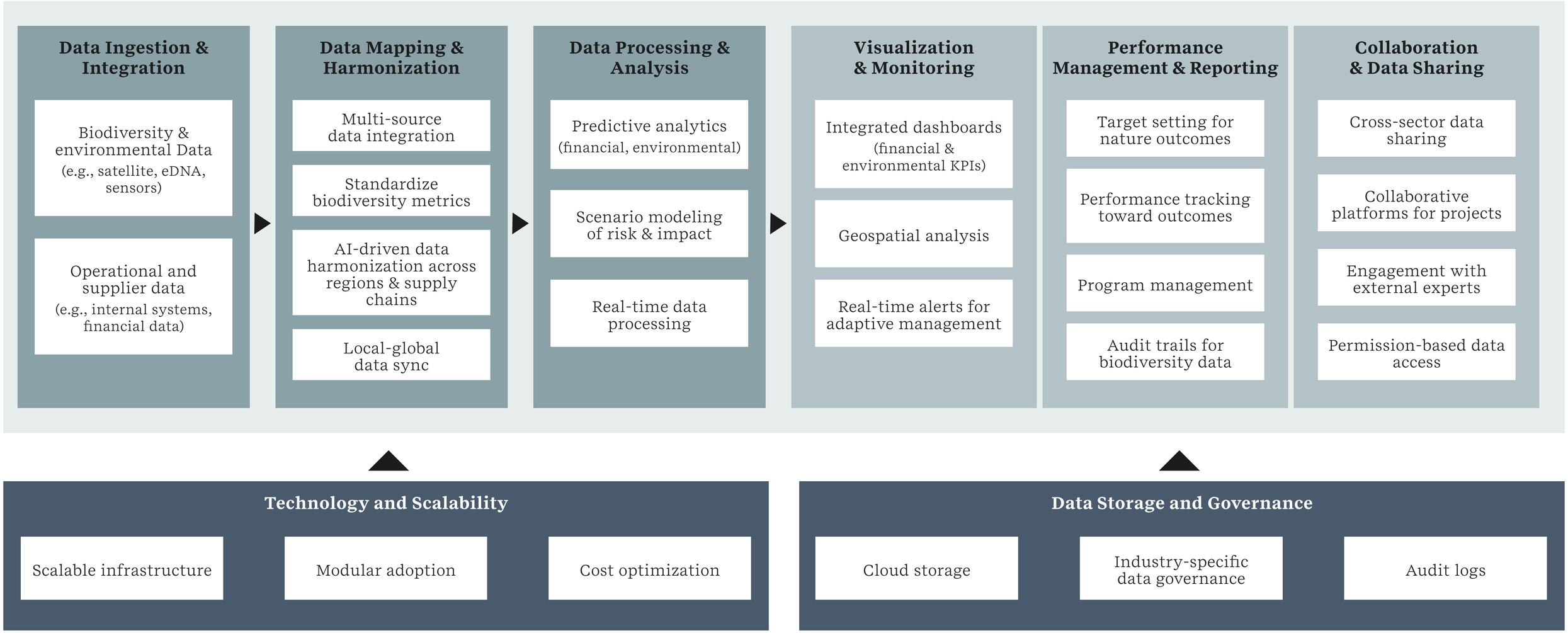
Data fragmentation is a significant challenge for companies managing nature-related information across operations, supply chains, and external sources. Salesforce's MuleSoft helps to integrate disparate data systems into a unified view, breaking down silos between departments like environmental, operational, and regulatory compliance. This integration helps companies meet frameworks such as the TNFD and EUDR, facilitating better decision-making and real-time monitoring.

For example, Yarra Valley Water used MuleSoft to connect over 100 internal systems, enabling real-time water quality monitoring and regulatory compliance.[10] Similarly, businesses can leverage MuleSoft to unify biodiversity metrics, supply chain data, and environmental monitoring systems, streamlining nature-related reporting and ensuring accurate, up-to-date insights. By automating data integration from various sources, MuleSoft helps companies meet their nature-positive goals at scale and simplifies compliance with evolving regulations.

In short, MuleSoft enables companies to overcome data fragmentation, empowering them to act on biodiversity and sustainability with real-time, integrated data.

Infographic 3: A unified dashboard for nature-related data

Integrated Data Platform for Nature-Positive Business



Expected characteristics of an integrated platform approach for nature-related data at a leading performance organization.

Outcome-based metrics and predictive analytics

Vision: It is essential to shift from practice-based metrics (e.g., progress against a target or certification) to outcome-based metrics with actionable insights into real-world impacts. Predictive analytics can also help forecast nature-related risks and justify investments in nature-positive strategies. Together, these tools enable companies to move from reactive compliance to proactive nature-positive growth. They drive the potential to unlock greater capital flows from financial institutions and investors, by adopting standardized measures related to questions of materiality and returns on investment.

"We would like to see the nature data field reach the maturity level the carbon field has reached recently in terms of predictive outcomes. For example, in climate we are able to say we planted these trees in this area and 10 years from now they will have sequestered this much carbon. I have not seen this same 'predictability' when it comes to biodiversity outcomes."

— Nestlé

DRIVING RESULTS VIA OUTCOME-BASED METRICS

Invasive species can wreak havoc on ranches, reducing the land's natural productivity for livestock by outcompeting native species for water and nutrients. To respond to this issue, Bayer Environmental Science and LifeScale Analytics created RangeView, a digital platform that uses Planet's PlanetScope imagery to help ranchers assess the effects of annual invasive grass infestations and evaluate their return on investment for treatments.[11]

With the RangeView tool, ranchers can compare current and historical images and evaluate metrics outlining available forage and lost forage capacity across pastures they have and have not treated for invasive grass infestations. By comparing across both treated and non-treated areas, ranchers can maximize pasture productivity across every acre and determine whether treatment regimes were effective. This example of technology-derived outcome-based metrics highlights how a focus on results rather than initiatives can simultaneously drive nature-positive benefits and generate favorable financial returns.

Key features needed to realize this vision:

- Tools for measuring biodiversity outcomes, including ecosystem health, water use reductions, and soil regeneration.
- Visualization and attribution tools that connect corporate actions (e.g., reduced fertilizer use, reforestation) to tangible environmental outcomes.
- Nature-specific predictive models to forecast future impacts and associated risks based on current data and historical change.

"Companies need to move beyond practice-based metrics to outcome-based measurements in order to understand impact. Just knowing how much less nitrogen a farmer uses from one year to another does not tell the whole picture from a nature perspective. Instead, we need things like how much of the nitrogen a farmer uses is running into a waterway and how much can run into the waterway before issues arise."

— *Nestlé*

"We are exploring the use of predictive modeling tools to help us assess what types of nature-related interventions we may pursue at sites in order to deliver on our aim to achieve a net-positive impact for applicable projects."

— *bp*

MONITORING OUTCOMES OF REGENERATIVE AGRICULTURE INITIATIVES FOR DECISION MAKING ON PRIORITY PRACTICES

NatureMetrics has partnered with Unilever to support the delivery and measurement of its regenerative agriculture projects. The projects aim to improve soil health, water quality, and overall biodiversity across Unilever's supply chain, as well as enhance crop yield and enable local communities to protect their livelihoods and environment.

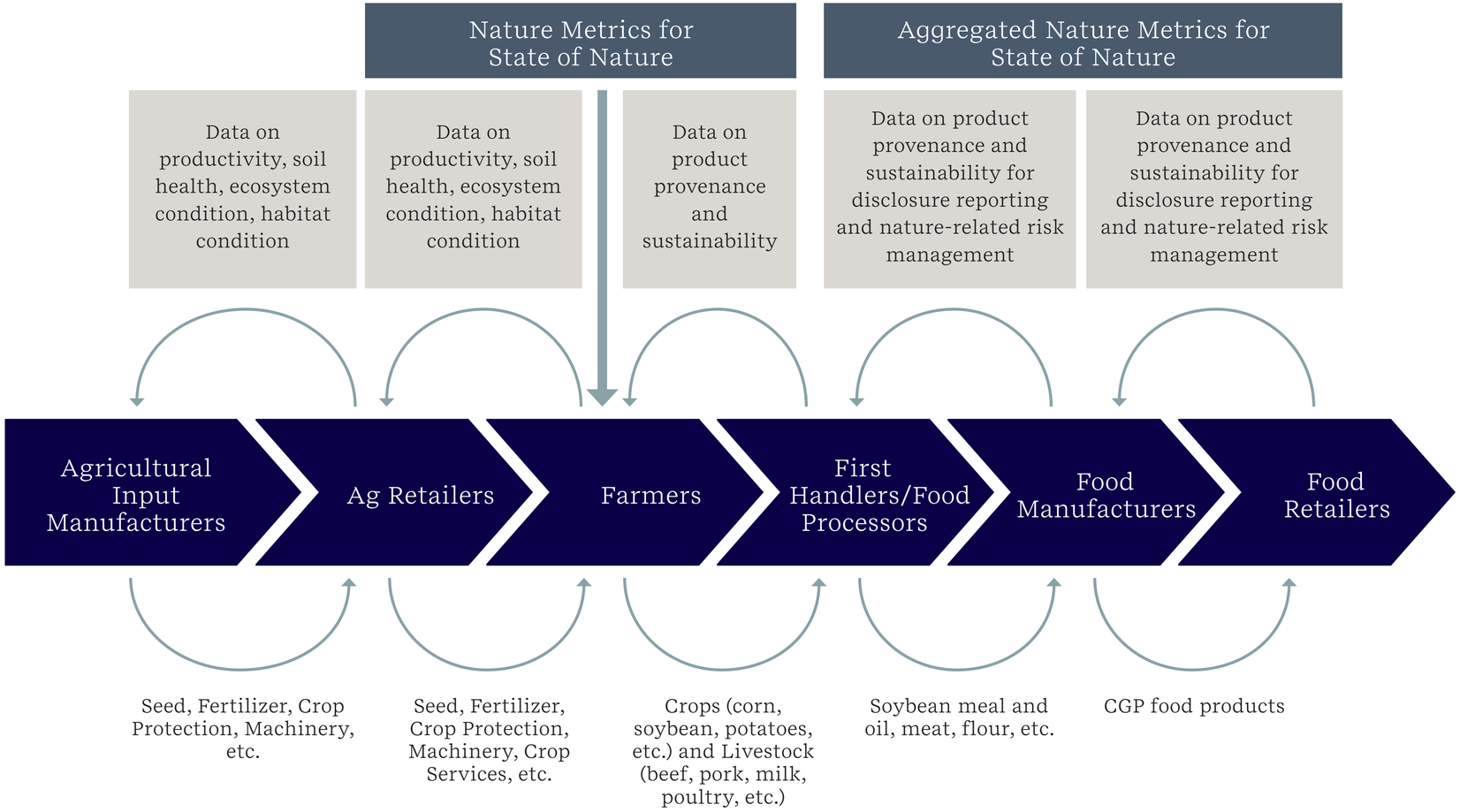
NatureMetrics' eDNA sampling technology will be used to detect the changes in bacterial and fungal diversity in the soil, as well as the diversity of above-ground invertebrate species. The data produced, combined with other biodiversity metrics, will provide clear insights to demonstrate the positive impact of regenerative farming practices implemented in Unilever's supply chain.

NatureMetrics has already begun to establish baseline data across thousands of hectares in Argentina, Canada, the UK, and Europe. The business will support Unilever and its implementation partners across a five-year period to collect the best possible data, interpret it, and understand which practices they need to roll out at a greater scale to deliver long-term impact.

Cross-sector, multi-stakeholder collaboration on solutions

Vision: A collaborative ecosystem where companies, governments, NGOs, and investors share data, insights, and innovations to address nature-related risks at a landscape or value chain level. For example, the European Union Deforestation Regulation (EUDR) will require unprecedented cooperation within commodity value chains. Cross-sector collaboration is essential for driving collective action and restoring ecosystems. Moving from 'do no harm' to nature-positive outcomes is likely to require cross-sector collaborations and broad-scale solutions that harmonize input data, connect actions to outcomes, and support collective action. Since nature risk is local, but has global implications for planetary health, these solutions are existential for companies and their stakeholders, mitigating enterprise risk that is regularly missed in existing fragmented and disarticulated data management systems.

Infographic 4: Data flows through an agricultural value chain



The flow of data through an agricultural value chain - from the farmer drawing data and insights and the agricultural input manufacturers through to what the farmer can and needs to provide to food processors, manufacturers, and retailers. The same flow would apply to any productive or extractive sector where a chain of custody is enabled by suitable metrics and data cascades, enabling both decision-making for management actions and disclosure.

Key features needed to realize this vision:

- Consortia and platforms for real-time cooperation among stakeholders, facilitating data sharing, collective action and monitoring, and scaling nature-positive investments.
- Shared financing mechanisms (e.g., sustainability-linked loans, impact funds, project finance) to pool investments and drive collaboration on nature-based solutions and landscape-level restoration projects.
- Transparent reporting standards aligned across sectors and geographies, enabling companies to compare performance and improve decision-making based on shared insights.

"We can do everything we possibly can within our supply chains to protect nature but to truly scale impact, we must work with other stakeholders at a landscape level. Through our nature-related partnerships, we are focused on expanding relationships to support nature-friendly farming and enable large-scale nature recovery."

— *Tesco*

"There are challenges we cannot solve on our own and so we seek to collaborate via industry initiatives to tackle these issues. For example, we co-led a project exploring how to unlock private investment in coastal Nature-Based Solutions through the Sustainable Markets Initiative's Financial Services Taskforce. This resulted in the publication of a practitioner's guide on the topic."

— *Barclays*

"It is so important to engage externally—with peers and the market—to stay up-to-date on nature-related developments. And while you can study these issues forever, at some point, you need to start applying what you have learned and make real changes."

— *Multinational bank*

SALESFORCE EXPERIENCE CLOUD AND SLACK: ENABLING LARGE-SCALE COLLABORATION FOR NATURE-POSITIVE ACTION

Salesforce Experience Cloud and Slack are powerful tools for fostering collaboration among businesses, NGOs, governments, and other stakeholders. Experience Cloud helps build interactive communities for sharing sustainability goals and data, while Slack enables real-time communication and coordination.

For example, Greenpeace leveraged Salesforce Experience Cloud to connect its global network of supporters, activists, and volunteers.[12] This platform allowed seamless collaboration and information sharing, essential for driving environmental campaigns.

Companies focused on nature-related initiatives can similarly use Experience Cloud and Slack to streamline collaboration, share critical data, and coordinate large-scale projects like biodiversity protection or ecosystem restoration. These tools enable efficient multi-stakeholder engagement, accelerating progress towards nature-positive goals.

Source: PlanetScope

Scalable and cost-effective nature-positive investments

Vision: A financial paradigm shift that makes nature-positive investments profitable, scalable, and mainstream. This involves moving beyond philanthropic and government-backed nature-related funding to creating incentives and market instruments that generate capital flows, particularly in land-use-intensive sectors like food and agriculture, forestry, and extractive industries. Although the financial sector has been slower to adopt nature-related data and products, the use of standard outcomes-based metrics and disclosures in finance can significantly shift the characterization and understanding of nature-related risk, business practices, and disclosure towards nature-positive pathways.

Key features needed to realize this vision:

- Innovative financial products (e.g., sustainability-linked loans, green bonds, impact funds) that integrate nature-related key performance indicators (KPIs).
- Tools like the EU Taxonomy to provide a common definition for nature-positive investment activities and simplify investor reporting.
- Regulatory support and de-risking mechanisms, such as blended finance options, to encourage private sector investment in nature-positive projects.

TECHNOLOGY HELPS INVESTORS BUILD CONFIDENCE IN THEIR NATURE RISK DUE DILIGENCE

Multinational development banks are increasingly requiring the projects they invest in to comply with environmental safeguards (e.g., IFC Performance Standard 6). NatureMetrics has worked with several large infrastructure projects globally that have sought financing under these terms. The projects have involved deploying eDNA technology to map biodiversity against performance standards (e.g., the presence of endangered, migratory, congregatory, or invasive species and habitats) and therefore the measures that the investee might need to take to manage risks associated with these biodiversity features.

Aligned to Sustainability-Linked Bond Principles, NatureMetrics has developed a Nature-Positive Framework that enables consistency in nature-related data collection to track and report transaction and "Biodiversity Impact Fund" level targets. This includes the identification of nature-related KPIs linked to a Fund's objectives, as well as defining fit-for-purpose monitoring, measurement, reporting, and validation approaches in sourcing geographies suitable for aggregation from site/transaction level impacts through to informing decision-making and disclosure reporting at the Fund portfolio level. The metrics used for site level performance monitoring can be applicable to environmental market instruments that help determine biodiversity units, credits, losses and gains of biodiversity, and to meet regulatory requirements.

Compared to conventional biodiversity data collection methods, these new nature technologies enable data collection at early due diligence stages, providing robust, scientific data and deeper, more sophisticated insights. This is an alternative to waiting for a full biodiversity assessment, which can often be a year or more later in the project life cycle and often are not normally considered in an investor's due diligence timeline.

"There are many barriers preventing private sector capital from flowing to nature-based projects that philanthropic and government capital have traditionally financed, for example, the risk profile and size of the projects falling outside appetite. Overcoming these barriers will require collaboration across government, industry and financial services. We are exploring this topic further through industry collaborations such as the Sustainable Markets Initiative's Financial Services Taskforce."

— *Barclays*

"Private markets will be essential to scaling nature-related investments going forward. However, nature-related reporting standardization will be needed to ensure comparability as private market investment activities and objectives are diverse and bespoke."

— *Just Climate*

Intuitive and accessible tools for all stakeholders

Vision: Accessible tools that allow non-expert users (e.g., business risk specialists, decision makers, investors) to easily adopt, understand, manage, and report on nature-related information. These tools must incorporate accurate, up-to-date, and verifiable data from local to global sources for good decision-making, overcoming existing issues with data fragmentation and mismatches between risks and understanding of decision-makers. They should also fit into the existing workflows of users and reduce the complexity of managing nature data across supply chains and business areas.

Key features needed to realize this vision:

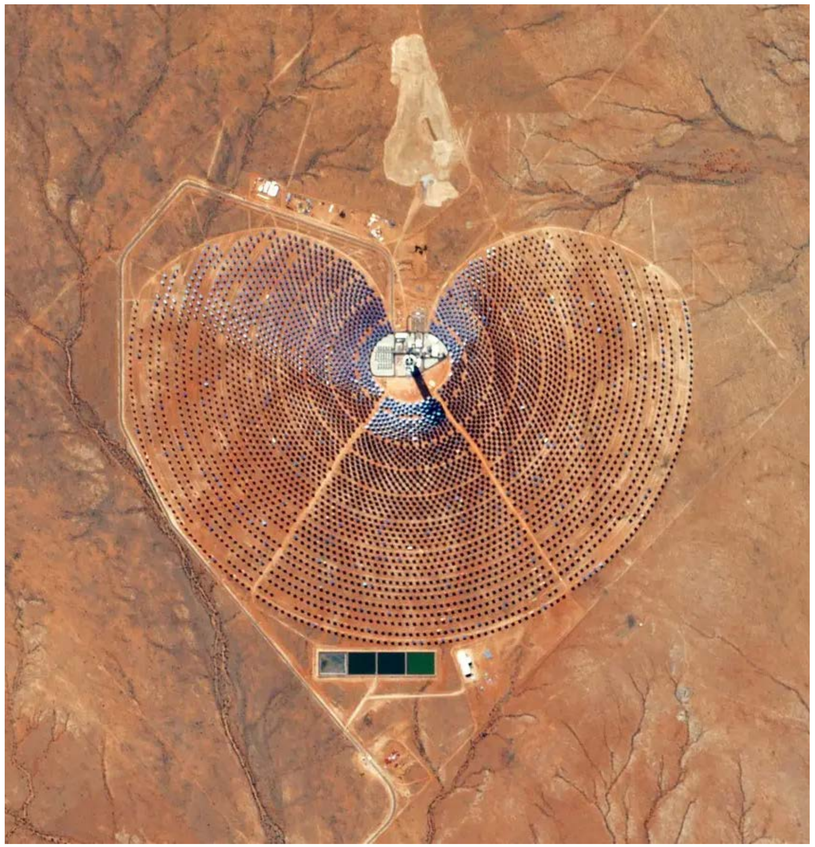
- Actionable insights for senior decision makers without deep scientific knowledge.
- User-friendly interfaces that enable non-expert users to report on nature-related considerations, compare across places and options, and monitor progress.
- Incentivize data entry and verification by embedding these features into platforms that offer payments or other tangible benefits to stakeholders.
- Mobile-first platforms for real-time data collection, especially in regions with limited access to technology infrastructure.

"We need nature-related tools that are easy to understand and use, particularly because there are so many contributors across the supply chain from whom we could source nature-related information. Ideally, these tools would require little user input and generate a clear and simple output that we can easily translate across our supply chains."

— Tesco

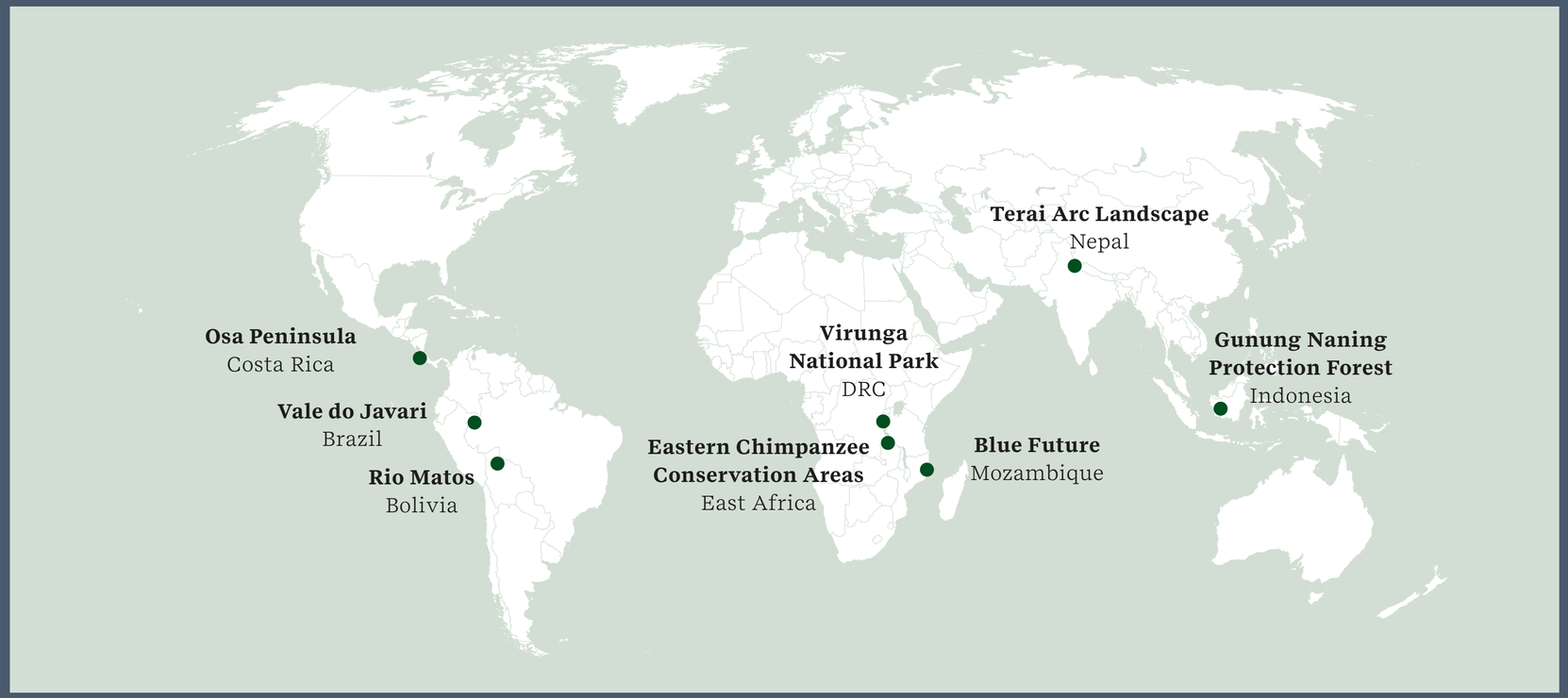
"Not all company sites or suppliers can collect nature-related data, act on these data, and monitor progress on their own. Instead, they will need efficient, easy to use tools and techniques to support these initiatives and help them address their nature-related impacts and dependencies."

— WSP



Source: PlanetScope

Project Centinela is a new Planet program to help leading companies, scientists, and conservationists monitor and safeguard up to 50 of the world's most vulnerable biodiversity hotspots.



Project Centinela puts an unprecedented array of high-resolution, high-frequency satellite imagery, analytics, and Planetary Variables into the hands of those who are maintaining a lifeline for biodiversity and the communities who depend on that variety of life.[13] With tailored 'biodiversity subscriptions' integrated into the Planet Insights Platform, organizations can see incremental change in remote regions of the world, assess environmental health and pressures on ecosystems, and calculate the success of restoration efforts over time in high-biodiversity sites.

With the high-temporal, high-spatial, and high-spectral resolution imagery Project Centinela offers, companies like NatureMetrics and Microsoft are delivering timely and targeted insights that can catalyze effective nature-related action and large-scale investment before it is too late. The first eight sites (see map above) applying these methods were launched in October 2024, including Planetary Variables for forest carbon, soil water content, land surface temperature, crop biomass, and road detection, as well as scripts for assessing burned area, land cover change, surface water coverage, and more.

Regulatory-ready solutions with built-in compliance

Vision: A comprehensive nature-related reporting system that automatically aligns with emerging initiatives like the TNFD, CSRD, EUDR, EU Taxonomy, and SBTN, and existing regulations like the U.S. Endangered Species Act. A streamlined workflow helps companies stay ahead of evolving regulatory requirements and simplifies corporate reporting. This streamlining will also help companies better connect nature risk to broader enterprise risk by linking traditional regulatory compliance initiatives with the emerging nature space.

Key features needed to realize this vision:

- Automated compliance tools that are regularly updated to reflect changes in nature-related reporting frameworks. These would also be able to be integrated into existing business processes to embed compliance within the most relevant parts of the business.
- Integrated templates for reporting on nature-related risks, dependencies, and opportunities.
- Technological solutions that generate auditable data, reducing internal compliance team workloads.

"Guidance in the biodiversity space can be difficult to interpret as there are fewer developed metrics than there are for themes such as carbon or water. Frameworks like the SBTN are helpful here, as they're clear on target setting initiatives, and which metrics are appropriate."

- Multinational consumer goods firm

"The UK's Biodiversity Net Gain framework offers a leading example for how to quantitatively assess biodiversity at the site level within the built environment. It provides a consistent way to evaluate a site's habitat value before and after development, while also offering a framework for off-site compensation if needed. This approach could serve as a model for global application, creating a standardized method to protect and enhance biodiversity in development projects."

— Multinational consumer goods firm

CROWLEY MARITIME'S USE OF SALESFORCE NET ZERO CLOUD

Salesforce Net Zero Cloud leverages AI to provide businesses with a streamlined platform for complying with complex regulatory and voluntary frameworks like CSRD, GRI, and SASB.[14] The platform automates sustainability-related data collection, monitoring, and reporting, reducing operational burdens while ensuring alignment with evolving regulatory requirements.

Crowley Maritime, for instance, uses Net Zero Cloud to centralize its emissions tracking and reporting efforts.[15] As Crowley notes, "The platform helps us achieve transparent, accurate accounting for our emissions across all business segments and geographies." This allows the company to meet its net-zero commitments more efficiently and ensures they can track sustainability goals in real-time. Additionally, the platform's AI-driven insights allow Crowley to forecast future emissions and identify strategies to reduce its environmental footprint.

By leveraging AI, Net Zero Cloud transforms traditional compliance into a proactive tool, offering forward-looking insights that enable businesses to anticipate regulatory shifts, optimize their sustainability strategies, and drive meaningful progress towards broader sustainability goals.

Companies shift from “do no harm” to “nature-positive”

Vision: Companies are shifting from mitigating harm to actively contributing to nature-positive outcomes, as seen in the mainstreaming of ecosystem restoration, regenerative agriculture, and nature-based solutions. However, scaling this vision requires better methods for evaluating the outcomes of nature-related actions and demonstrating their financial value.

Key features needed to realize this vision:

- Tools to track and measure nature-positive outcomes, such as reforestation, species recovery, and soil health improvements, as well as mitigating adverse outcomes, such as reducing deforestation and decreasing agrochemical use.
- A shift to business models that prioritize long-term, nature-positive outcomes over short-term financial gains.
- Financial incentives and products that reward companies for achieving nature-positive outcomes, demonstrating their value to stakeholders and investors.

“bp updated its biodiversity position in 2020 with an aim to achieve net-positive impacts in new applicable in-scope projects, and we are seeing an increasing number of corporates setting similar aims, as well as regulatory requirements for net-positive impact or biodiversity net gain, such as in the UK.”

— *bp*

“Many investors are shifting their investment focus from ‘do no harm’ to ‘nature-positive’ practices by investing in companies that are actively restoring natural landscapes.”

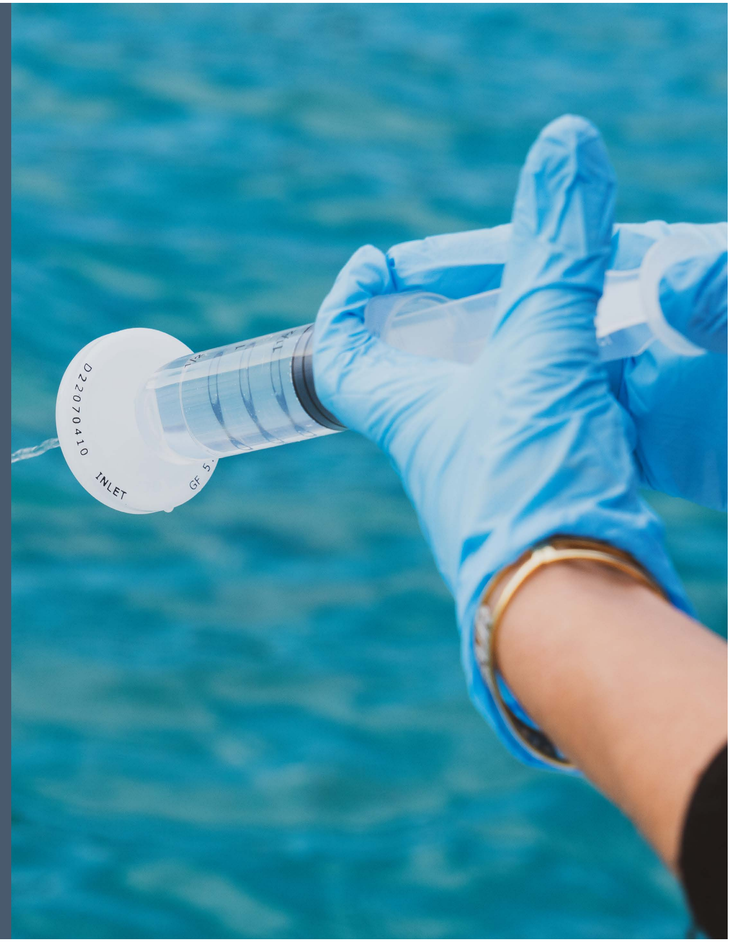
— *Just Climate*

TECHNOLOGY TO QUANTIFY NATURE IS HELPING COMPANIES MOVE FROM ‘DO NO HARM’ TO ‘NET POSITIVE’

Energy companies working in the offshore renewables sector have an opportunity to improve ecosystems that have been degraded historically. Ocean areas where turbine arrays and cables are installed can no longer be fished or exploited in ways they might have been previously. The new infrastructure can also act as a substrate for the colonization of pioneer species, particularly if biodiversity-friendly materials are used in construction.

NatureMetrics has been working with several energy companies to show biodiversity improvements from the baseline (taken as part of compliance for their environmental impact assessment (EIA)) to post-construction. EDF Renewables and Natural Power found that eDNA technology detected 70 percent more fish species compared to the conventional EIA method of trawling, while also generating data on marine mammals and seabirds.

It reduced vessel time by 40 percent with only one-third of personnel resources needed. They could also use eDNA to continue to monitor nature impacts within the turbine array post-construction, which is inaccessible when using trawling.



Addressing nature-related risks and opportunities:

An exercise in bridging gaps and building understanding

ERM SUSTAINABILITY INSTITUTE

Addressing nature-related risks and opportunities :

An exercise in bridging gaps and building understanding

The common vision for corporate nature action that emerged from our interviews highlights that with the right strategy, buy-in, and data, companies can combat the biodiversity crisis while generating business value. Seven critical insights form the foundation of achieving this vision, highlighting the current state of corporate nature action, the obstacles facing it, and the adoption of technology solutions.

Nature risk is both global and highly local

Nature-related risks, such as water scarcity, biodiversity loss, and deforestation, are inherently local, yet companies and financial institutions often rely on global, aggregated data. This reliance creates significant blind spots, as global datasets can overlook the critical nuances needed to understand and manage risks at the local level. Nature-related risk presents a dual challenge—it is both global in scale and highly localized in impact and dependency.

"A global water stress tool (such as the World Resource Institute's Aqueduct tool) indicates water stress in a region, however, local data shows the specific water source we are interested in is not stressed. While just one example, it illustrates the complexities of applying broad metrics to local situations."

— Dundee Precious Metals

It is essential that companies integrate site-specific data into their decision-making processes to capture local detail. However, accessing relevant local data is only the first step because companies often encounter gaps that limit its usefulness. These are largely due to the complexity of ecosystems, which makes it nearly impossible to create a comprehensive dataset for any given area, let alone for broader regions.

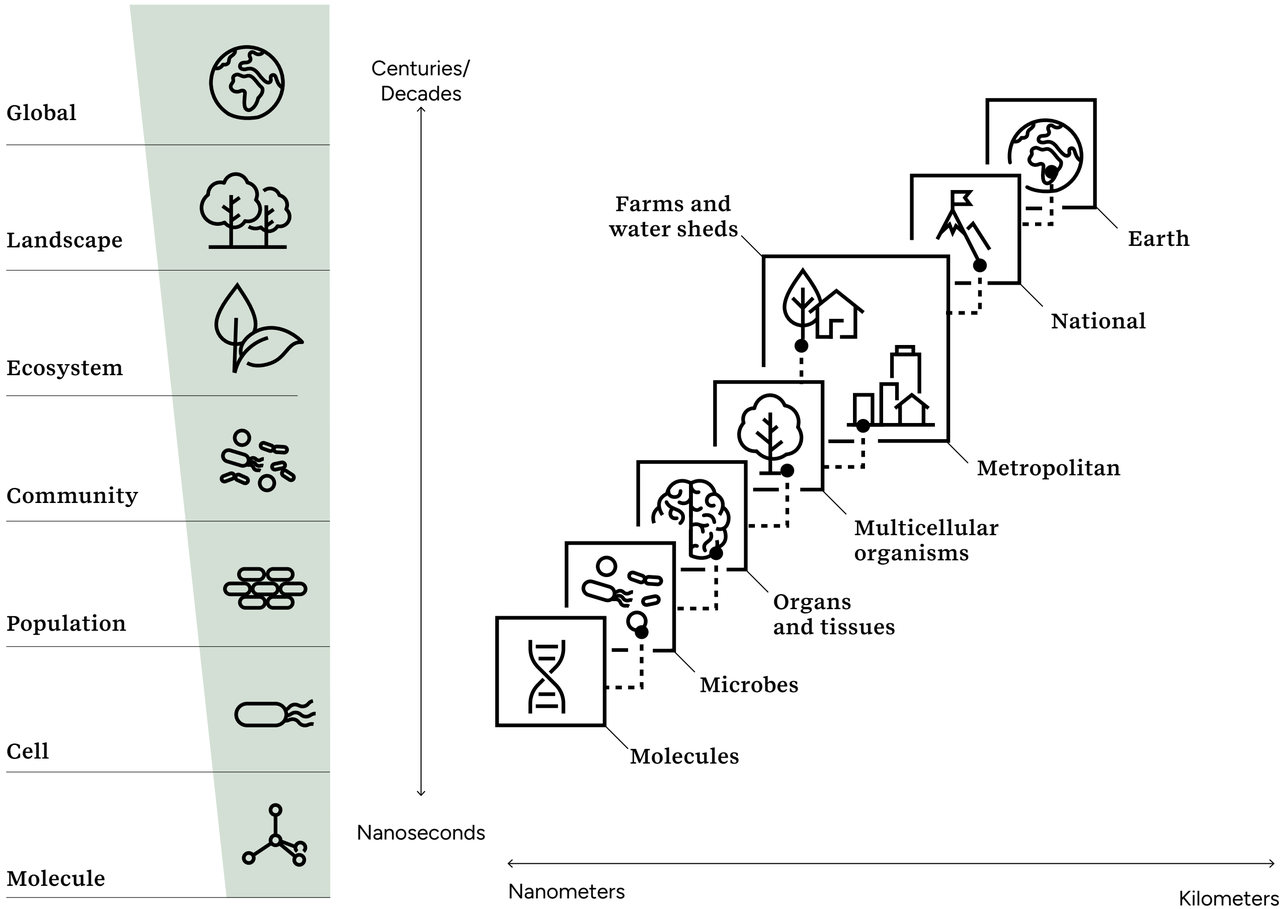
Several data gaps are common. One is species, where more easily studied animals (e.g., large mammals) are prioritized over smaller or harder-to-track species, such as insects. This data collection bias is not intentional but stems from the relative ease with which some species can be studied compared to others.

Geographic gaps also persist, with more comprehensive data available in the Global North due to its long history of collecting nature-related data, whereas the Global South often lacks robust datasets due to resource disparities and still-developing practices. Temporal gaps further complicate the picture as traditional, on-the-ground data collection methods are costly and time-consuming, making it difficult to track changes in species or ecosystems over time.

"I think if we were to consider a particular technology platform, what we'd really want to understand is how it could help us measure and track indicators like water pollution or deforestation. Can it provide insights at a specific location level, or is it more suited for a broader, sovereign-level view?"

— Multinational bank

Infographic 5: The many levels of nature-related data



In today's world of AI, we know that complex data can drive simple, accurate metrics and insights, so complexity itself is no barrier. Rather, the barrier has been how to turn nature into data at sufficient scales to use these powerful analytical approaches. The resolution of biodiversity data needs to be fit-for-purpose, with outcome-based insights dependent on evidence from site level data to inform management actions and decision making. Scope, scale, and application of data and associated metrics are combined through AI to create deeper ecosystem insights. Nature technologies overcomes this, unlocking data at scale and paving the way for a new generation of simple, accurate metrics driven by the full complexity of the natural world and reflecting actual changes on the ground.

TOWARDS LANDSCAPE SCALE NATURE RECOVERY

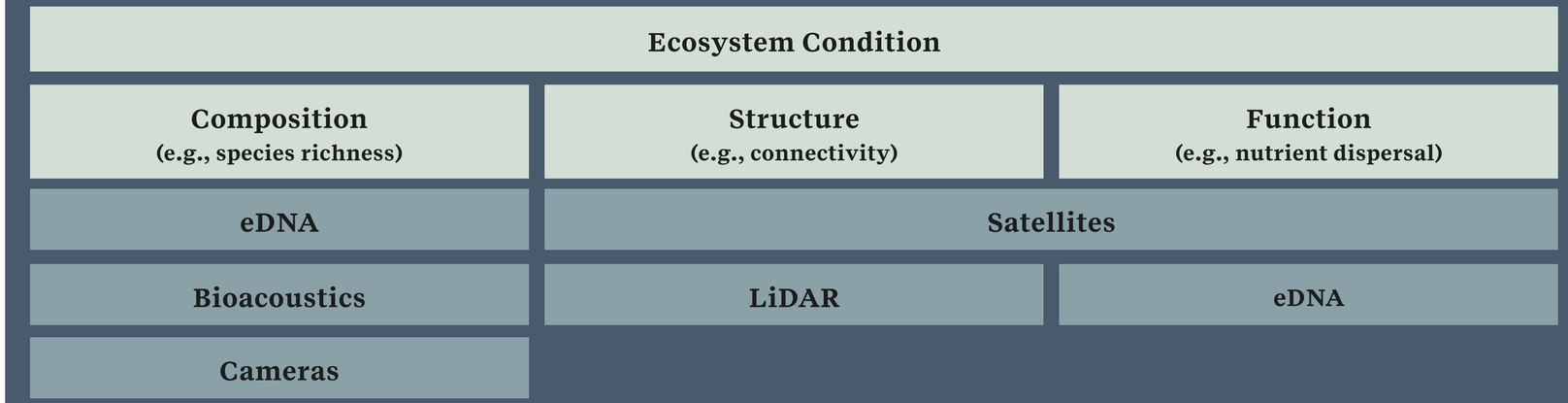
Nature recovery needs to occur at the landscape scale and requires measuring both species and habitat metrics. NatureMetrics, therefore, goes beyond species-based metrics to offer insights into land-use change and general landscape and habitat characteristics that, alongside species insights, describe ecosystem conditions.

Nature-related reporting frameworks and monitoring standards are aligning on the need to track ecosystem condition. NatureMetrics addresses this need through a composite "ecosystem condition" metric using eDNA, acoustics, and spatial metrics.

The foundational Habitat and Land Cover Assessment (HLCA) feature of its Nature Intelligence platform helps companies with this tracking through habitat extent, intactness, and condition measures (the core requirement for any ecosystem state of nature monitoring).

Alongside tracking performance, HLCA metrics provide valuable ecological context at a site level, showing previous trends in land-use change and providing key standalone metrics for natural capital accounting and nature recovery monitoring while also helping companies design biodiversity action plans.

Tracking Ecosystem Condition
A combination of technologies and measurements are needed:



Ecosystem condition is a consistent measure across different ecosystems. The combination of technologies and metrics will vary across different ecosystems but should always be aggregated to composition, structure, and function scores for all ecosystems.

When data is available, analyzing it from afar rarely provides a complete understanding at the local level. Global datasets often obscure local details that are essential for managing risks effectively. As a result, companies must strike a balance between leveraging global data for broad trends and investing in local data collection to capture specific, hyper-local nuances. Local data collection often reveals critical insights not visible from global sources and remote analysis. These interactions provide a deeper understanding of how specific sites interact with nature - wherever they sit in the value chain.

"One of the biggest nature-related challenges for banks is accessing and assessing client's asset-level data. If we do not have complete data here, then our assessment of the client might not paint a full picture. Currently, much of this data is missing in the market."

— Multinational bank

To manage nature risks effectively, companies must integrate global and local data sources to address any gaps and blind spots that exist in current datasets. By combining comprehensive global data with on-the-ground insights, they can better understand the local context of their operations, enabling risk mitigation and progress towards nature-positive outcomes.

The link between nature risk and enterprise risk is still under-developed

Collecting and using nature-related data has gone on for decades. It is crucial for legally required environmental impact assessments, helping companies avoid legal and regulatory consequences or public controversies. Destroying endangered species' habitat or polluting a water body leads to lawsuits and regulatory violations.

What is changing quickly is that the true financial impact of these risks is being recognized, whether that is about supply chain resilience, license to operate, or investor disclosure. And the good news is these risks can be mitigated with accurate, up-to-date, and comprehensive nature data.

"[There is] a need for companies to shift focus from just assessing nature-related risks to actively understanding and mitigating their nature-related impacts."

— *Kinross Gold*

Some companies have used nature-related data in supply chain risk management years before regulations required them to do so, and now regulations like the EUDR are forcing many more to play catch up. Nestlé, for example, uses nature-related data to meet its target of achieving a deforestation-free supply chain by 2025. The company traces key ingredients to ensure they come from regions with low deforestation risk, which it implemented well before the EUDR was enacted.

While companies have identified nature-related risks at a site level or for one commodity, many have struggled to integrate them into their enterprise risk frameworks across business areas and sustainability pillars.

"We concluded that food and agriculture sectors are a priority from a nature-related risk perspective, but our efforts to integrate these risks with broader climate-related risks are still evolving."

— *Rabobank*

One reason for this is that nature is often treated as separate from climate change despite the two being deeply interdependent. This disconnect can hinder comprehensive risk management, as addressing one issue without considering the other may lead to missed opportunities for holistic mitigation or create undesirable tradeoffs.

"Our sustainability strategy revolves around four pillars. Nature and Climate Change are each separate pillars, despite the interdependencies between the two."

— *Unilever*

Despite the growing recognition of nature-related risks, many companies still assess them in isolation without taking the necessary steps to mitigate and manage them effectively. This limits their ability to protect their business from the impacts of nature degradation and the loss of ecosystem services.

"As a bank, we need to be actively monitoring and understanding our nature-related risks and how they are evolving, as this directly impacts our portfolio. When managing these risks, it's crucial to understand the appropriate mitigation strategies."

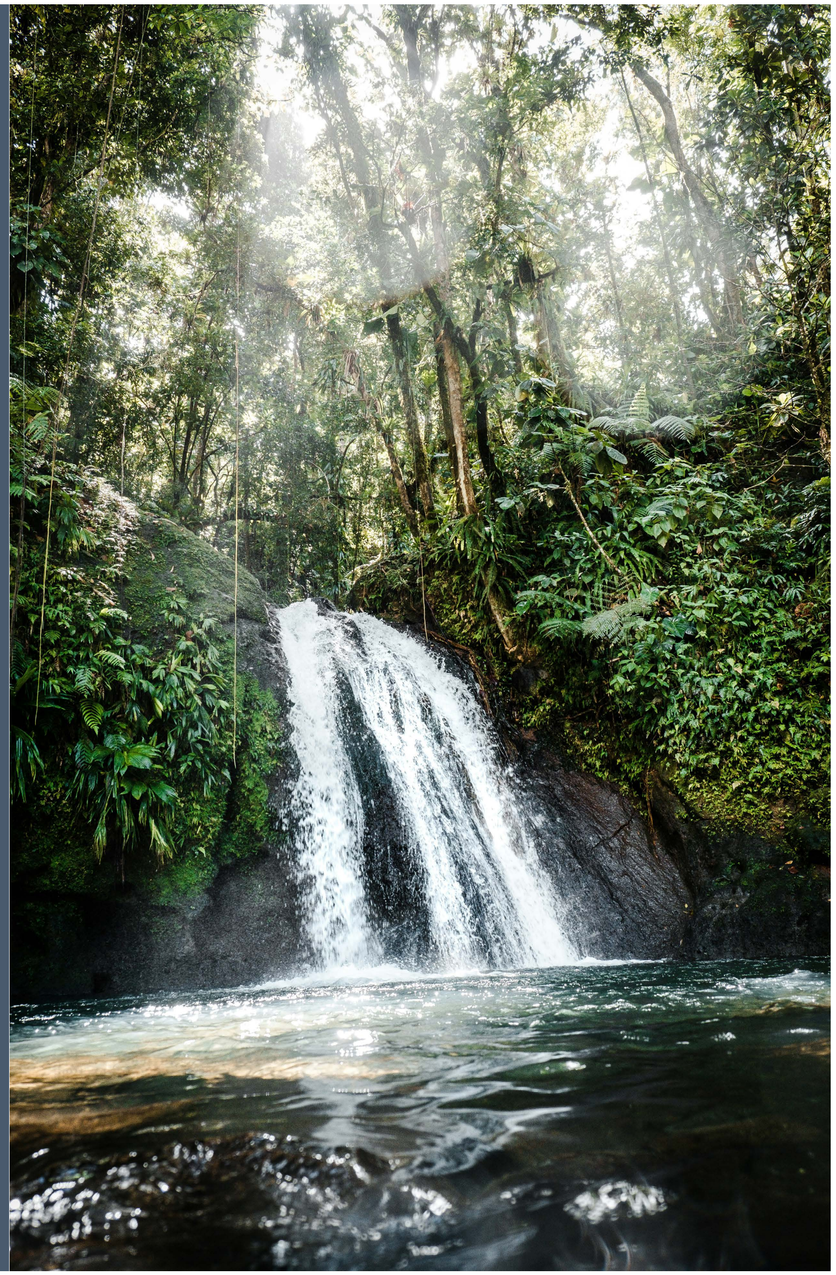
— *Multinational bank*

The solution lies in uniting nature-related data and insights with existing environmental and risk management systems. Rather than creating standalone, disconnected tools, companies must integrate nature risks into their broader enterprise risk strategies. This unified approach will enable companies to capture a more complete picture of their risks, ensuring that both climate- and nature-related risks are cohesively managed. This is slowly changing, and some companies we spoke with believe that only large-scale ecosystem collapse would trigger many organizations to appropriately assess and manage nature-related risks. We hope this is not the case.

HELPING COMPANIES IDENTIFY FINANCIALLY MATERIAL NATURE AND WATER RISKS

ERM recently worked with a leading software company which was adopting the core methodologies of TNFD LEAP, SBTN, European Sustainability Reporting Standards (ESRS) E4, and CDP to help it assess its interactions with nature and water across its own operations and value chain, particularly in regards to risk.

The assessment answered key questions including "where do our interactions with nature and water cause financially material risks to our business model?", "which suppliers do we need to hold to account?", "where are our assets exposed to multiple risks across both nature and water?", and "where should we prioritize mitigation and restoration actions?". The assessment's results informed the company's immediate actions to de-risk its business model today while highlighting opportunities for supplier and stakeholder partnerships within the landscapes it operates in.



Lack of corporate decision-maker and investor understanding hinders nature-positive growth

Companies face challenges communicating nature information in ways that are understandable to corporate decision-makers and investors. While these groups increasingly care about sustainability, they often lack the tools to act on related data, limiting their ability to drive strategy and capital towards nature-positive solutions.

"Many banks have worked on nature-related initiatives to reduce pollution, improve water efficiency, etc. However, a key challenge is breaking down related jargon so that people can truly understand what these actions mean and the impact they have."

— *Multinational bank*

"Having access to reliable technologies that would allow investors to accurately monitor and promote best practices through communication with farmers and landowners can inform investment decision-making, ensure data consistency across portfolio companies, and improve reporting quality."

— *Clarmondial*

CASE STUDY:

Balancing regulatory compliance and investor expectations

CSRD compliance can create business challenges. Many companies view the directive as foundational, expecting it to cover other disclosure frameworks such as the TNFD. However, a tension between regulatory compliance and investor expectations–stemming from differences in focus, timing, and flexibility between these elements–complicates how they position themselves in the nature-positive space.

While regulations emphasize compliance with standardized reporting, investors seek more forward-looking, impact-driven insights on sustainability and nature-positive growth. This creates a challenge for companies, as they must balance meeting legal obligations with addressing evolving investor demands for proactive environmental leadership.

Decision-makers and investors prioritize clear, actionable data that fits within existing corporate structures and financial frameworks, whereas nature-related metrics often derive from complex, scientific sources that cannot be easily aligned. One way companies are addressing this is by developing products and systems that connect datasets with corporate reporting requirements. Nestlé, for example, is investing in systems that help it understand the dependencies and impacts its operations have on nature. This investment allows the company to credibly articulate biodiversity outcomes linked to specific products, which in turn helps bridge communication gaps between decision-makers and investors.

"It is to be expected that we are often going to work with very limited data with which to make key strategic decisions, as it is difficult to consolidate farm level detail across our entire value chain. If we were able to do so, we could make very specific biodiversity-related decisions on some of our very high risk sites or bonds."

— Multinational consumer goods firm

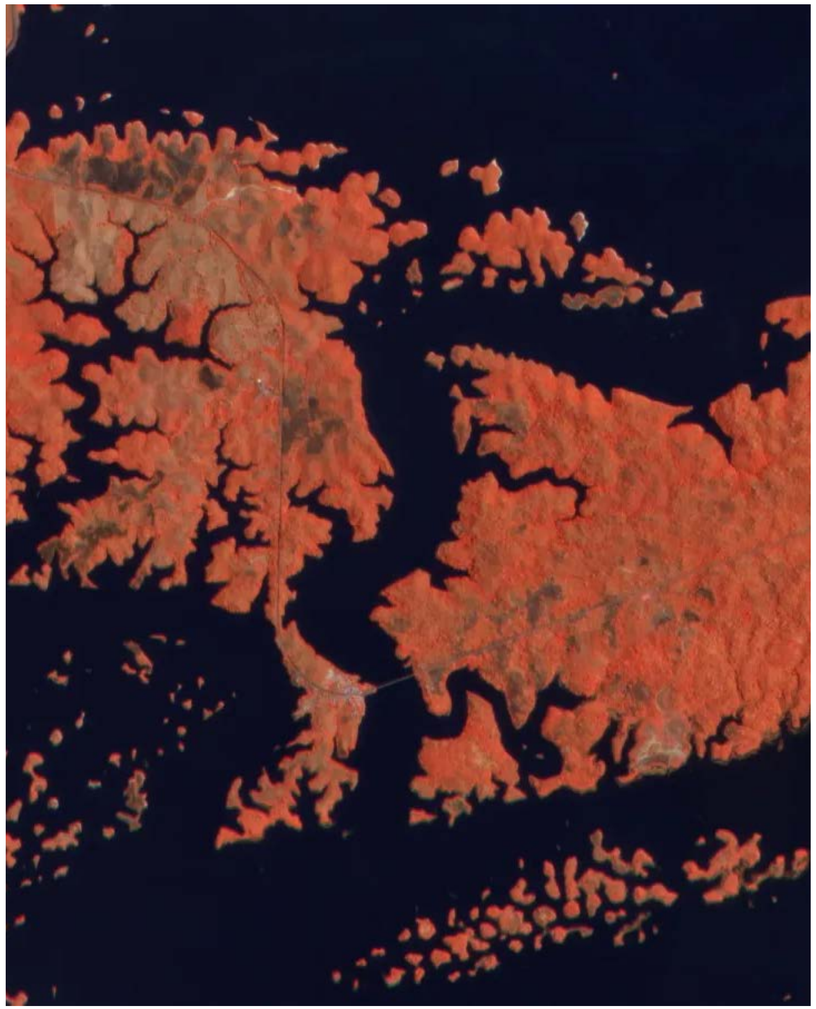
For investors, a long-term goal is to develop systems that can demonstrate biodiversity and nature-related outcomes in ways that are valuable to both corporate decision-makers and investors. Just Climate, for example, sees biodiversity as the next frontier in sustainability reporting, and aims to be at the forefront of this movement by refining its reporting processes. Its effort illustrates the growing recognition that nature-related data can drive value, but only if presented in a way that meets decision-maker and investor needs.

The challenge for companies taking these next steps is that nature-related disclosure expectations are still evolving. Companies must experiment with different ways of measuring and reporting biodiversity outcomes, which makes decision-makers and investors hesitant to adopt nature-positive action and investment strategies.

"Clients lack nature-related data and are unsure where to obtain it. They are also overburdened by preliminary climate requirements, and the addition of new nature-related regulations that they must evaluate and comply with, which further complicates their situation."

— Rabobank

There is also a gap between the scientific data about nature-related risks and opportunities and the corporate intelligence that decision-makers and investors require to take informed action. Companies that align nature-focused communication with commercial priorities will be well-positioned to drive nature-positive action. However, many struggle to translate the scientific data that underpins nature-related information into easy-to-digest corporate intelligence that decision-makers and investors can use. To overcome this challenge and better inform future action, companies must build nature-related knowledge and skills internally.



Source: PlanetScope

Companies are moving from “do no harm” to “net positive”

A shift is occurring as companies move beyond mitigating negative impacts, such as deforestation and agrochemical use, towards embracing net-positive strategies like biodiversity restoration and reforestation. Many are now grappling with what nature-positive means and how to measure it.

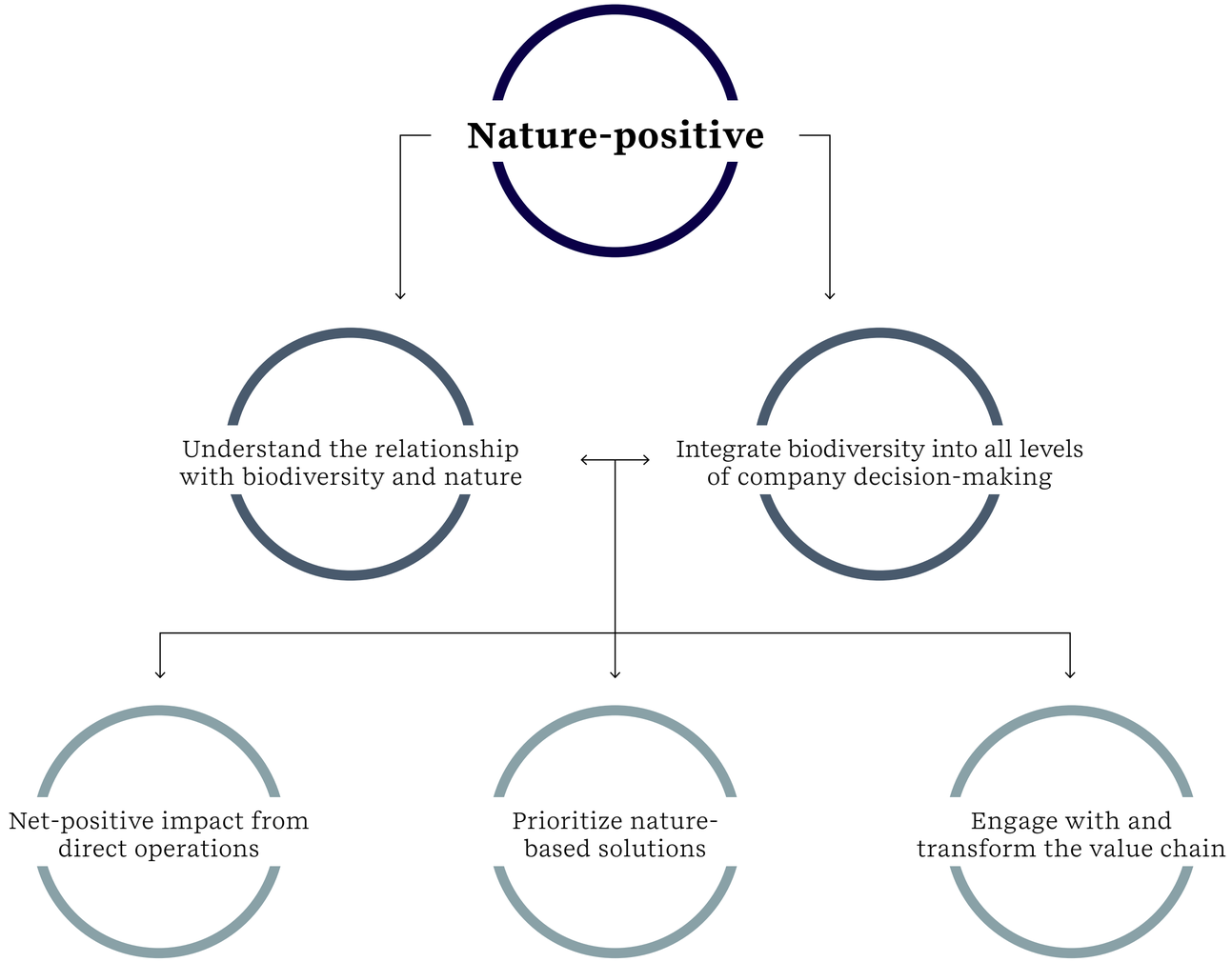
“We are investing in companies who are actively restoring natural landscapes but are still in the early stages of understanding how to measure and scale impacts of their efforts.”

— Just Climate

Historically, company reputations have been damaged by incidents including oil spills, chemical releases, and deforestation scandals. While such negative examples are widely covered, there are less well-publicized success stories. Companies in the food and agriculture sectors are increasingly adopting regenerative agriculture practices, while financial firms are aligning their investments with nature-positive outcomes. The common thread is the effective use of nature-related data to make more informed decisions.

For corporate sites, nature-positive ambition is not the issue; it is the mechanics of implementation that are so hard. Many, particularly those lacking adequate information or external consulting expertise, struggle because they lack accessible tools and techniques for data collection, monitoring, and reporting progress at the site level.

Infographic 6: The NatureMetrics nature-positive framework



No net loss and net-positive impact on biodiversity are a subset of nature-positive and link to site-level performance of a company’s assets through applying the mitigation hierarchy. Companies should do everything possible at the location of their operations to deliver no net loss and net-positive impact while contributing to a nature-positive economy through their value chains, governance models, and application of nature-based solutions.

CASE STUDY:

Navigating new biodiversity regulations

Rabobank is actively working to address new biodiversity regulations while fulfilling its own nature-related commitments, including those related to land use, deforestation, and land conversion – which are considered material topics for the bank. This is a challenge, particularly in regions where national policies, such as those permitting legal deforestation, may not align seamlessly with the bank's sustainability ambitions and Nature Vision. Rabobank has adopted an approach to nature grounded in the mitigation hierarchy, which prioritizes avoidance, followed by minimization, restoration, and compensation of nature-related impacts. This gap between national and corporate strategies makes the shift of nature-related initiatives from negative impact to positive impact more difficult, as it enables value chain partners to pursue actions that are disconnected from the company's ambitions.

"In regions like Latin America, where 'legal deforestation' still exists, challenges arise in balancing these realities with Rabobank's focus on tailored and innovative solutions based on the mitigation hierarchy," Rabobank stated.

"Rabobank's innovation department puts strong focus on initiatives such as Acorn Rabobank (carbon credits from agroforestry), avoided deforestation, and land restoration."

— *Rabobank*

Companies are working to overcome site-level challenges by centralizing and refining diverse data streams to ensure timely and actionable insights. Initiatives like no-deforestation policies are now supported by advanced data collection methods, including GPS and satellite monitoring systems, to track progress and ensure accountability. These systems can help businesses navigate evolving regulatory landscapes, aiding compliance while mitigating environmental and social risks.

Another solution lies in promoting accessible, user-friendly tools that allow non-expert stakeholders—such as farmers, smallholders, and suppliers—to collect and report nature-related data. Including these groups in nature-positive efforts will be critical to scaling impact across globe-spanning operations.

"We have worked for a decade to ensure our sourcing is not causing deforestation (and other natural land conversion), and made good progress. However, we do not just aim to slow the decline, we want to reverse it. Through our Net Zero Roadmap (and our forest positive strategy) we are also supporting reforestation and landscape initiatives that deliver positive outcomes for nature."

— *Nestlé*

The shift from "do no harm" to "net positive" represents a fundamental evolution in how businesses engage with nature. For companies to make this transition, they must overcome significant challenges in scaling biodiversity efforts, defining clear metrics, and identifying the right tools and data systems. Cross-sector collaboration, outcome-based metrics, and integrating nature into core business strategies will be essential for companies to drive real, measurable change for ecosystems worldwide.

Financial institutions are lagging behind other sectors but have the potential to scale nature-positive investments

Financial institutions lag behind sectors like food and agriculture in integrating nature-related data into decision-making. But the finance sector has significant potential to rapidly scale nature-positive investments. This requires a shift from traditional philanthropic and government-backed funding towards private capital flows, which are incentivized to invest in biodiversity preservation and ecosystem restoration.

Lessons can be drawn from climate risk management, where frameworks like the Taskforce on Climate-related Financial Disclosures (TCFD) and the Network for Greening the Financial System (NGFS) have successfully guided disclosures and scenario assessments. Financial institutions now routinely use climate models to assess asset risks and identify climate-resilient investment opportunities.

Translating biodiversity outcomes into actionable metrics for investors remains more difficult. Despite the progress of nature-focused frameworks like the TNFD, measuring nature-related risks to assets and supply chains, and exploring alternative investment opportunities under varying levels of nature degradation is still a significant challenge.

Nature-related regulations such as the EUDR, CSRD, TNFD, and SBTN are pushing the finance sector towards standardized disclosures, but these frameworks are complex (see Table 3). Financial institutions must balance regulatory compliance with the need to develop new investment opportunities that support nature-positive growth.

"Nature-related financial disclosures are on track to become a corporate requirement. This has the potential to drive further investments into nature-related assets as a means of mitigating corporate impacts and dependencies on nature. Voluntary corporate target setting on nature and biodiversity may also prove to be an additional driver."

— *Anew Climate*

Financial institutions are also beginning to recognize the importance of actively managing nature-related risks, but many are still in the early stages of translating these insights into actionable strategies for value creation.

"In order to produce outsized investor returns and create long-term sustainable businesses, we need to think about climate- and nature-related risks from an operating risk reduction perspective and in terms of potential value creation opportunities."

— *Adamantem Capital*

Given their influence over global capital flows, financial institutions have immense potential to scale nature-positive investments. As data standardization progresses and frameworks like TNFD gain traction, the sector is well-positioned to make investments that are both profitable and scalable.

CASE STUDY:

Managing nature-related risks through data

Barclays is beginning to engage on and assess the nature-related impacts, dependencies, risks, and opportunities associated with the different sectors it finances. It piloted the TNFD LEAP framework on the European Food and UK Agriculture sector and is currently applying the methodology to other sectors in its portfolio. Trying to obtain asset level impact data has been a challenge in this process though and Barclays would welcome more collaboration in this area.

Table 3: Overlap in nature-related disclosure and reporting frameworks

State pressure, response	Theme	Topic	Corporate reporting						Theme total	Topic total
			TNFD	SBTN	GRI	CSRD	SFDR	IFC (PS6)		
Management responses	Consultancy	Narrative	1	1	1	1	1	1	6	13
		Scenario analysis	1			1			1	
		Financial valuation				1			1	
		Proximity of locations*	1	1	1	1	1		5	
Pressures on biodiversity	Impacts	Greenhouse gas emissions & carbon	1	1					2	20
		Invasive species	1		1	1		1	4	
		Land/sea change	1	1	1	1		1	5	
		Pollution	1	1	1				3	
		Resource use	1	1	1				3	
		Water use	1	1	1				3	
State of nature	Dependencies	Ecosystem services		1	1			1	3	4
	Species	Extinction risk	1		1	1			3	8
		Population	1		1	1			3	
	Ecosystems	Habitat extent	1	1	1	1	1		5	14
		Ecosystem condition	1	1	1	1			4	
		Composition		1		1			2	
		Structure				1			1	
		Connectivity	1			1			2	
		Function							0	
			14	**11**	**12**	**13**	**3**	**4**		

Summary of overlaps in nature-related disclosure and reporting frameworks. Descriptions of specific disclosure requirements can vary across frameworks but fall under common themes (e.g., Habitat extent). As such, the above table groups disclosure requirements into 19 topics across 5 themes.

Consultancy themes include metrics and disclosures that require engagement with consultants (e.g., business transition plans) or through desk-based assessments (e.g., geospatial risk assessments). Impact themes include metrics referring to pressures (e.g., Invasive Species or Pollution). Dependencies refers to ecosystem services. Species themes include metrics needed at the species-level (e.g., population size or extinction risk), while Ecosystem themes include metrics related to characteristics of community compositions, habitat structure, and ecosystem function.

Outcome-based metrics are the future, but few have figured it out

Companies are beginning to shift from practice-based metrics to outcome-based measurements, focusing on tangible improvements in biodiversity and ecosystem health. Historically, organizations have tracked actions like reducing fertilizer use or committing to 100 percent regenerative agriculture, but stakeholders now demand proof of real-world improvements.

In sectors like agriculture and mining, companies can begin to directly measure biodiversity and ecosystem health on their lands or work closely with suppliers to do so. In the finance sector, the challenge lies in translating nature-related outcomes into metrics that are comparable across portfolio companies and actionable for investors and portfolio managers.

Although many companies are beginning to identify their major nature-related impacts, translating these into measurable outcomes, attributed to particular activities and institutions, remains a significant challenge. One primary obstacle is ensuring that the data they collect is both actionable and capable of capturing the complex dynamics of ecosystems.

Table 2: Examples of outcome-based metrics

Outcome-based nature metrics are used by companies and institutions to measure environmental and ecological conditions by focusing on tangible results or outcomes, rather than inputs, actions, or risk mitigation activities. Examples include:

1. Biodiversity

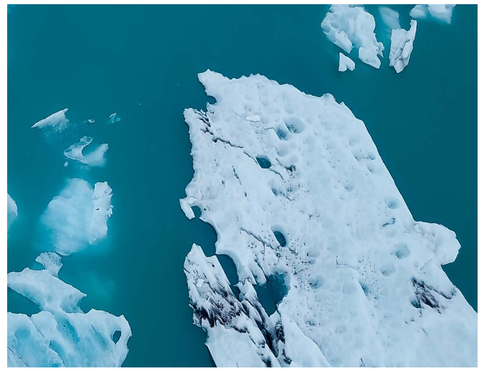
- **Species population trends:** Changes in the populations of key species (e.g., endangered or indicator species).
- **Species richness & abundance:** Number of different species in a given area and relative abundances of those species over time.
- **Genetic diversity:** Variation within species to ensure successive generations are sufficiently distinct to remain healthy.

2. Ecosystem health

- **Habitat state:** The condition of ecosystems, for example, vegetation cover, soil health, and water quality.
- **Nutrient cycling and sequestration:** Movement of key minerals through ecosystems and storage of carbon in ecosystem components.
- **Ecosystem services:** Benefits provided by nature, including resources for humankind, protection against extreme weather, and pollination.

3. Natural resource management

- **Sustainable harvesting:** Resource extraction measurement against maximum sustainable yield, for example, for hunting or rare plants.
- **Water use:** Extraction of groundwater or surface water at sustainable rates for ecosystem health and human use.
- **Soil quality:** Maintaining soil nutrients and erosion rates at sustainable levels to ensure ecosystem stability and agricultural productivity.



4. Climate and resilience

- **Greenhouse gases:** Measuring reductions in emissions and sequestration from conservation and restoration.
- **Climate adaptation:** Evaluating ecosystem resilience to extreme weather, temperature rises, and other climate change impacts.
- **Disaster risk reduction:** Measuring the ability of natural features such as tree stands and wetlands to buffer against natural phenomena (e.g., storms and flooding).

5. Human-nature interactions

- **Sustainable livelihoods:** Measuring the livelihood improvements created by conservation efforts.
- **Public engagement:** Changes in awareness of nature and behavior towards it.

To achieve this, companies should prioritize metrics that reflect the overall state and health of ecosystems rather than focusing on granular details, such as individual species or a single ecosystem service. Ecosystem health often serves as a better indicator of nature-related outcomes because habitat loss or the interruption of ecosystem services pose greater risks to both businesses and the environment. In contrast, focusing too narrowly on individual species can obscure larger ecosystem vulnerabilities.

"We recognize that improving practices on individual farms and not looking at the bigger picture will not always lead to the outcomes we and our stakeholders want for nature. Often we need to think beyond the boundaries of the farm and beyond improved practices to measuring tangible outcomes."

— *Nestlé*

The same can be said for ensuring that data is collected across value chains. While tracking and generating a positive outcome at individual sites can deliver meaningful results locally, global companies need to take a broader view. Overlooking impacts and outcomes from sourcing partners prevents businesses from achieving optimal results. Adopting outcome-based approaches is essential to substantiate claims of net-positivity and nature-based sustainability. By shifting their focus from isolated actions to measurable, system-wide outcomes, businesses can move beyond localized efforts and demonstrate a more meaningful commitment to nature-friendly operations.

With good data, comes the need for clear and repeatable methodologies. Many organizations still struggle to define what "nature-positive" truly means in their context. Unlike carbon accounting, which follows standardized guidelines like the Greenhouse Gas Protocol for tracking emissions, nature-related measurements are far more complex and lack uniform frameworks. This complexity creates uncertainty for companies, as they are unsure about what exactly needs to be measured, which leads to hesitation in fully committing to nature-positive initiatives. Fortunately, methodologies that combine existing biodiversity data and remote sensing are now being developed to unlock this challenge.

Ultimately, the shift to outcome-based nature reporting is inevitable, as stakeholders increasingly demand proof of real-world impact rather than promises of responsible practices. While companies are still refining their methods, the future lies in data that reflects the true state and condition of ecosystems, attributing changes to business actions, to guide better decision-making and enable businesses to protect and restore the natural environment on which they depend.

CASE STUDY:

Moving towards outcome-based metrics

Nestlé is making progress towards using outcome-based biodiversity measurements. For example, they have shifted their focus from sustainable farming to broader sustainable and resilient sourcing landscapes. This new approach recognizes that fixating on farm boundaries overlooks opportunities for them to invest in transforming the wider landscapes they source from and pursue non-farm initiatives such as helping protect forests and scaling reforestation efforts. They are currently exploring how to scale this shift across their global operations.

"We are moving from practice-based metrics to practice- and outcome-based nature measurement, reporting, and verification."

— *Nestlé*

THE POWER OF OUTCOME-BASED METRICS

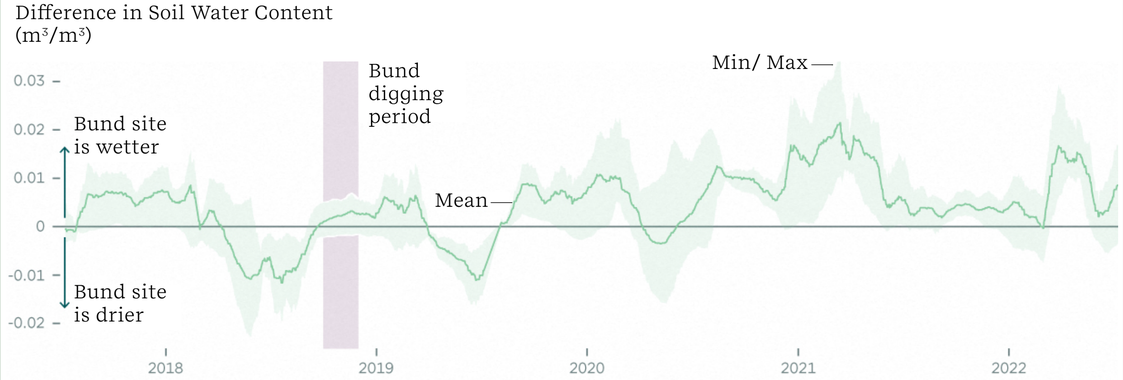
With East Africa's fertile areas being degraded into drought-laden deserts, environmental NGO Justdiggit used outcome-based metrics to evaluate the success of regreening projects in the region. Supported by Planet earth observation satellite data, Justdiggit set out to quantify the liters of water retained by soils, surface temperature changes, and vegetation cover changes before, during, and after bunds (i.e., semi-circular shaped ditches that help soil capture rainwater) were dug. In regions like East Africa impacted by drought and natural vegetation loss, the top layer of soil can harden and act as a seal, but by digging through the dry layer and creating bunds, rain water can trickle down and hydrate the parched land.

From their quantification activities, Justdiggit confirmed that their local regreening projects were successful in increasing soil moisture, lowering surface temperatures, and increasing vegetation cover over 300,000 hectares. This case study shows the power of outcome-based metrics, which enabled Justdiggit to determine what tangible outcomes its regreening efforts had on the surrounding landscape and report on these rather than just disclosing information on its activities.

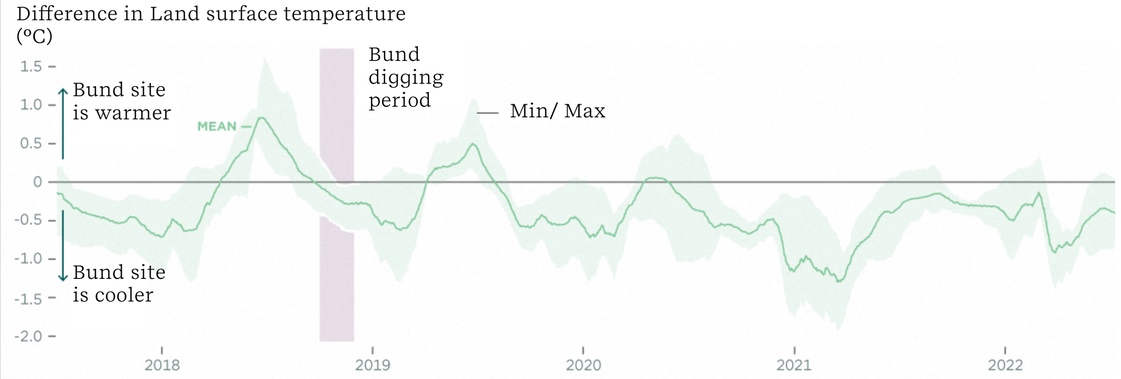
High-resolution, near-real time satellite imagery and analytics underpin outcome-based metrics. Planet's toolset includes PlanetScope (3.7m resolution, near daily globally), SkySat (50cm resolution, tasking), and Tanager hyperspectral imagery (30m, 400 bands, tasking), and datasets that track changes on Earth's surface called Planetary Variables. Planetary Variables include Forest Carbon Diligence and Monitoring, Soil Water Content, Land Surface Temperature, Crop Biomass, and Road and Building Detection and Change Detection. The Planet Insights Platform hosts a range of complementary analyses, from land cover change to surface water coverage to burned area mapping.

Vegetation restoration Pembamoto, Tanzania

Difference between soil water content at West Bunds site and control sites



Difference between daytime land surface temperature at West Bunds site and control sites



Data fragmentation is the biggest barrier, not a lack of technology alone

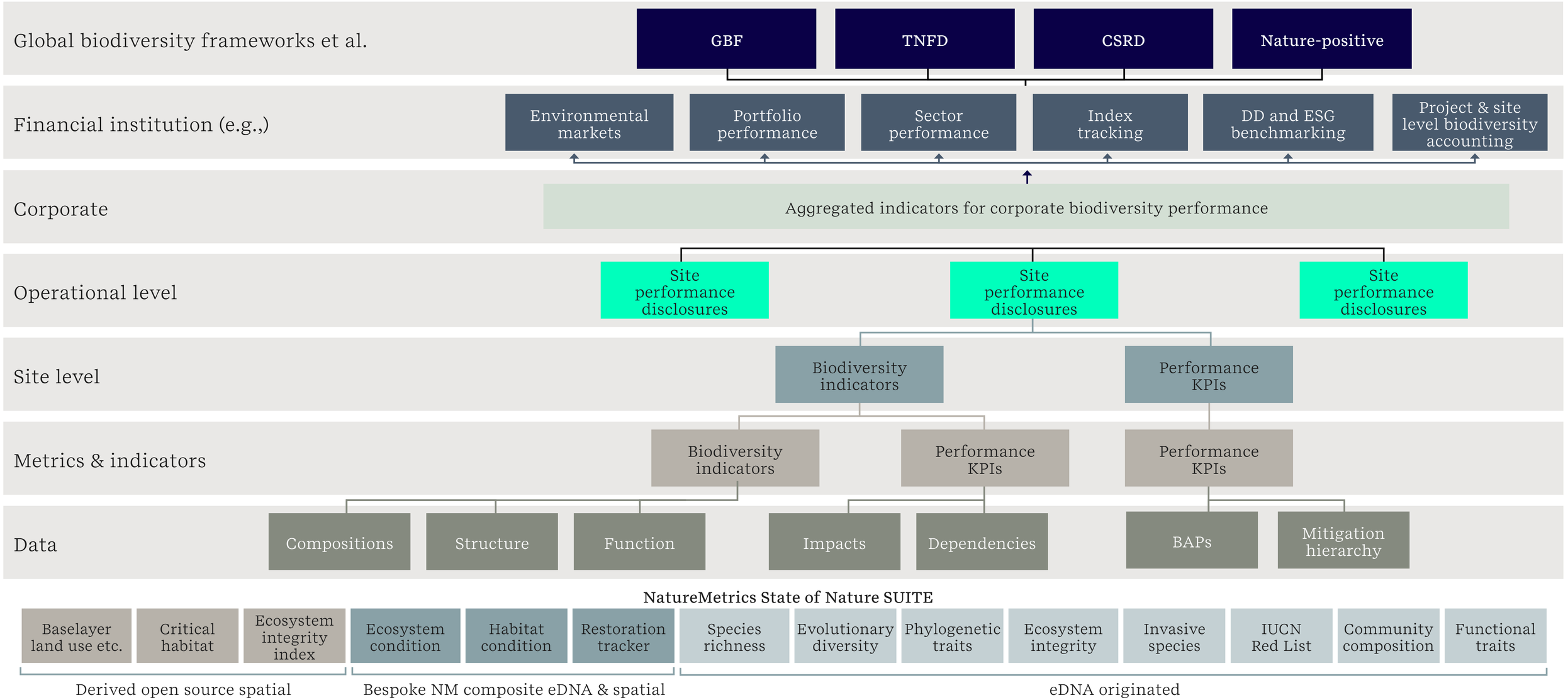
Despite the increasing availability of advanced technologies such as AI, remote sensing, and geospatial platforms, fragmented and inconsistent nature-related data continues to frustrate companies. Integrating data from diverse sources, spanning global supply chains, portfolios, and geographies, is incredibly complex. Financial services and other sectors new to these issues often rely on external data sources to understand their nature-related risks, but this reliance introduces data quality and relevance gaps, especially when global data misses critical local nuances or falls out of date.

"The challenge is always the data. Hopefully, with the EUDR and increased transparency demands, we'll see more traceability and better nature-related information as reporting improves. We're keeping a close watch on developments, particularly in regulatory pressures and government frameworks, to understand how they can enhance the way we conduct assessments."

— Multinational bank

While technology can help streamline data collection, consolidating information from numerous sources and verifying their relevance and recency is often overwhelming. As societal pressures to protect and restore ecosystems grow, companies face increasingly detailed environmental reporting requirements, further complicating data integration efforts.

Infographic 7: Select types of nature-related information



Measurement and monitoring of biodiversity and ecosystem health and condition are fundamental to inform management actions. Collecting site-level data creates the evidence base for biodiversity performance and nature-related reporting disclosure. These metrics can be aggregated into operational KPIs for insights into the management of risk and performance at multiple levels, from site to portfolio management to regulatory compliance and enterprise-wide governance.

USING CORPORATE NATURAL CAPITAL ACCOUNTING TO IMPROVE DATA COHERENCE, INTEGRATION, AND ANALYSIS

Seeking improved data coherence and quality, decreased data management costs, and greater ease in integrating nature into decision making, companies are turning to corporate natural capital accounting (CNCA). CNCA is a systematic process for measuring changes to natural capital and their associated values to the corporation and wider society.[16] The process is aided by innovative nature tech solutions and data management.

One of these is the EcoMetrix Solutions Ecosystem Intelligence (EI) Platform, which produces ecosystem condition scores, among other features. These scores from 0-100 allow companies to compare risks and opportunities and consolidate data across sites and portfolios. The EI Platform also enables the comparison of these scores for different site designs (see infographic below). ERM, for example, is supporting an Australian land developer in using the EI Platform to guide the design of a nearly 30 hectare greenfield.

Separately, JSW, an Indian cement major, is managing its No Net Loss strategy for biodiversity using a CNCA-based double entry bookkeeping system. Using CNCA standards and rules, it created a structured dataset for use across applications, much the way financial accounting does with monetary data (see infographic below).

Finally, ERM is helping an Australian Real Estate Investment Trust Corporation use CNCA to manage the biodiversity impact at its more than 50 urban locations. The work will result in a system for managing biodiversity impact that can guide corporate and site level decision making such as redesign, community engagement, and reporting.

Scenario 1

Business as usual

10

Service hectares
313

Scenario 2

Nature-positive

72

Service hectares
2278

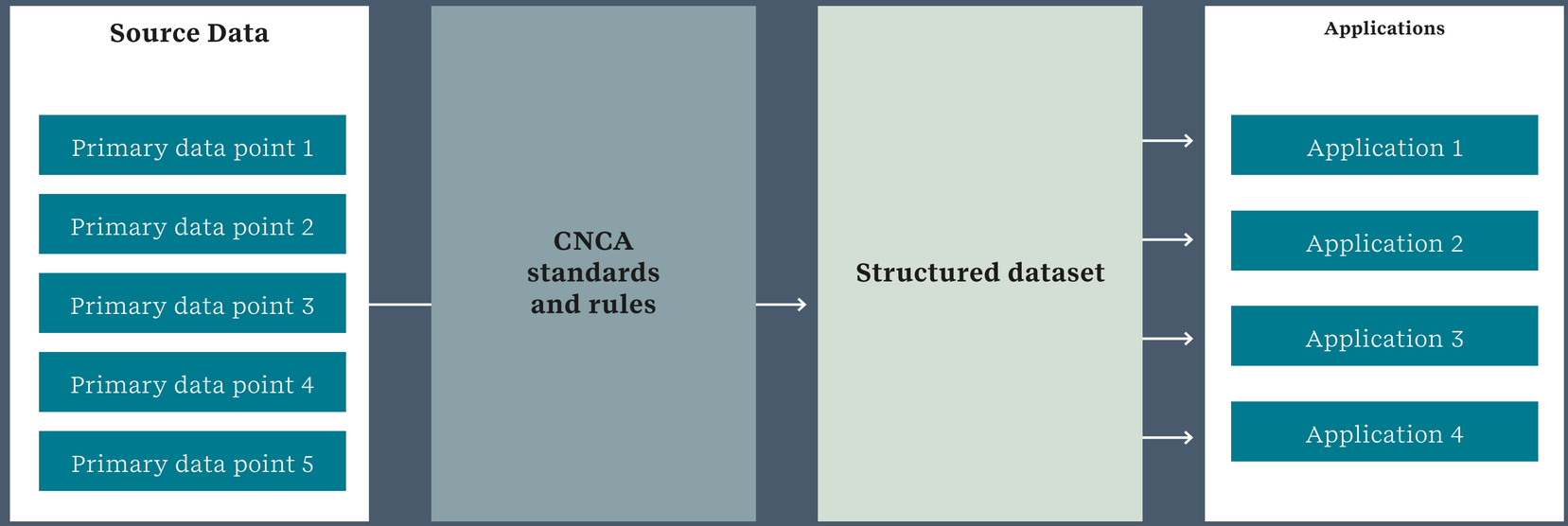
Reference

100

Service hectares
3256

Scenario 1
Has a performance gap of 90

Scenario 2
Adds nature-positive scenarios and narrows the gap to 28



"We are finding that there is currently little disclosure from industry on asset-level impacts; instead, it is mostly reported at a company level, which is hard to disaggregate to the individual asset level when conducting location-specific nature assessments."

— *Barclays*

High-level data alone fails to provide a cohesive "big picture" of a company's environmental impact and dependencies. This fragmented data prevents businesses from gaining a cohesive understanding of their risks and opportunities, leading many to consider overhauling their data management systems. However, investing in new systems without the assurance that they will be future proof is daunting.

"The nature-related data we already capture is too vast and does not serve a consistent purpose. We would like to be able to pull the same type of data from every farm to ensure the accuracy of our overall reporting, but this is complicated by the fact that the farms we use can often change year to year. We would be interested in technologies that would help us consistently capture data."

— *Multinational retailer*

What companies need is an integrated data platform capable of standardizing and consolidating internal and external data, creating a "single source of truth" for nature-related insights. While such tools exist, applying them across supply chains is a long-term, resource-intensive endeavor. Inconsistent data collection creates additional challenges, emphasizing the need for a coordinated approach to data management across company verticals and organizations.

"We have many different suppliers sending us many different nature-related data points in a wide array of formats."

— *Nestlé*

Advanced data and technologies can support these efforts, if applied across sites and business areas, but at the core of this issue is the difficulty in mapping the footprints of supply chains. Several of our interviewees highlighted the challenge of understanding the environmental impacts of their own or others' global supply chains, stressing that without better, standardized data, these impacts remain difficult to mitigate. In the end, leading companies suggest that diligent data collection, management, and analysis of companies' operations and supply chains are key to understanding and improving nature performance.

"Depending on the nature of the investee business, often the nature-related risks within the direct operations of a business are not as significant as one might expect. Instead, many of these risks lie within the global supply chains of these businesses, which reach into various regions. This poses a challenge, because mapping tier-one and beyond supply chains and understanding where these exposures exist is a complex and resource-intensive process."

— *Adamantem Capital*

CASE STUDY:

Handling inconsistent biodiversity data across sites

Kinross Gold has been gathering environmental data for years, including water flows and groundwater quality, as well as limited biodiversity data. However, this data is often inconsistent across sites, with some of its operations focusing more on water management and less on biodiversity monitoring and vice versa. At the same time, it is working to improve its data management practices, which currently rely on manual recording and entry.

"Our current data management practices are still evolving and often involve manual data recording and transferring information into spreadsheets."

— *Kinross Gold*

Nature tech and the path to a nature-positive future

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Nature tech and the path to a nature-positive future

The nature crisis is accelerating fast. Biodiversity loss, ecosystem degradation, and natural resource depletion threaten people, businesses, and whole economies, as well as the natural world. Companies must move beyond merely minimizing harm to actively contributing to the restoration of nature, yet they face significant challenges in collecting, managing, and - most critically - acting on nature-related data.

These challenges are broad and complex. Companies confront fragmented data, local blind spots in global datasets, poorly understood links between nature risk and enterprise risk, and reporting on activities that are weakly tethered to what stakeholders are increasingly asking for: outcome-based metrics of real-world impact. As one company highlighted:

"We have faced challenges in managing and reporting information across various departments, including environmental, social, financial, and operational data [to make business decisions across functions]."

– Kinross Gold

Across sectors, companies are increasingly clear on what they need from nature tech: integrated, scalable, data-driven solutions that provide visibility into their nature-related risks and opportunities. They want tools that not only streamline compliance but also deliver actionable insights that drive nature-positive outcomes, enhance transparency, and create value for their businesses. This is where the NatureTech Alliance comes in, offering the expertise, collaboration, and innovative digital solutions that empower companies to tackle these challenges and accelerate their journey towards nature-positive strategies and outcomes.

For companies just starting their journey towards nature-positive action, here are three key considerations:

1

Start with data collection:

Begin by consolidating asset- and nature-related data across your operations and supply chains, ensuring that you can map your environmental impacts and dependencies (to use the TNFD jargon, do the ‘locate’ and ‘evaluate’ steps of LEAP).

2

Prioritize outcome-based metrics:

Shift from tracking practices (read: effort) to measuring real-world outcomes (read: results), focusing on biodiversity and ecosystem health.

3

Leverage digital tools:

Use available technologies such as remote sensing and AI to enhance your ability to monitor, report, and assess risks in real-time and across sites.

For companies further along the road, the focus should shift to:

4

Integrate nature with climate risk:

Ensure that nature-related risks are fully embedded into your enterprise risk management and sustainability strategies alongside climate risks.

5

Scale technology adoption:

Expand the use of advanced technologies like geospatial analytics and predictive modeling across all portfolios and geographies to capture local shifts in a standardized way and drive informed decision-making. Move from ‘nature data for scientists’, to nature data for operational decision-makers.

6

Collaborate for greater impact:

Engage in cross-sector and multi-stakeholder collaborations to address nature-related challenges at a landscape level, leveraging partnerships to scale nature-positive investments and solutions.

As we look ahead to the next UN Biodiversity Conference, COP16, the role of policymakers and governments will be critical in shaping the frameworks, regulations, and incentives that guide corporate nature action. Strong policy leadership will drive the global standardization of nature-related disclosures and enable companies to align their strategies with global biodiversity goals. Governments must work hand-in-hand with businesses to create a future where nature is not only protected but actively restored, ensuring that companies can thrive in a nature-positive economy.

Source: PlanetScope

Appendix

About the NatureTech Alliance

The NatureTech Alliance, formed at the World Economic Forum Annual Meeting at Davos, will accelerate and scale the assessment, management, and disclosure of biodiversity impacts and dependencies on nature to help drive a sustainable future for nature, people, and economies.

Created by ERM, Salesforce, NatureMetrics, and Planet the Alliance will enable companies to develop a comprehensive understanding of the impact of their business on nature and prepare accordingly to report against new and impending nature regulations and frameworks such as the TNFD and CSRD.

Each member brings a unique set of expertise to form a comprehensive biodiversity management and reporting offering for businesses looking to effectively measure and track their approach to biodiversity.

ERM provides the sustainability consulting and global delivery capabilities to help organizations integrate biodiversity into their business strategies and operations. Salesforce offers its powerful technology, including Net Zero Cloud, and ecosystem reach, already supporting critical business technology processes for over 200,000 customers. Planet provides access to daily satellite data and analytics from the world's largest fleet of Earth observation satellites. Meanwhile, NatureMetrics brings its unique eDNA technology and scalable, on-the-ground biodiversity measurement prowess.

Source: PlanetScope

At ERM, sustainability is our business. We are the world's largest advisory firm focused solely on sustainability, offering unparalleled expertise across business and finance. ERM partners with clients to operationalize sustainability at pace and scale, through our unique combination of strategic transformation and technical delivery capabilities.

Our diverse global team of experts works with the world's leading organizations to help them set clear sustainability targets, measure progress and operationalize strategy through deep implementation and business transformation. With more than 50 years of experience, our ability to integrate sustainability solutions and our depth and breadth of technical knowledge are why organizations choose to partner with us as their trusted advisor.

Salesforce helps organizations of any size reimagine their business for the world of AI. With Agentforce, Salesforce's trusted platform, organizations can bring humans together with agents to drive customer success—powered by AI, data, and action.

Visit www.salesforce.com for more information.

NatureMetrics is a world leader in delivering nature data and intelligence, deploying cutting-edge technology to generate biodiversity insights at scale using environmental DNA (eDNA), Earth Observation (EO) and advanced data science and AI. Our Nature Intelligence Platform is transforming how businesses report their nature impact, bringing a scalable solution to biodiversity monitoring, equipping global businesses for new nature reporting commitments.

Driving impact for over 500 clients across 100+ countries, we've recently been recognized as an Earthshot Prize finalist, Bloomberg Top 25 UK Startup to Watch, a Bloomberg NEF Finalist 2024 and nominated for the Google Geo for Good Impact Awards.

Planet is a leading provider of global, daily satellite imagery and geospatial solutions. Planet is driven by a mission to image the world every day, and make change visible, accessible and actionable. Founded in 2010 by three NASA scientists, Planet designs, builds, and operates the largest Earth observation fleet of imaging satellites.

Planet provides mission-critical data, advanced insights, and software solutions to over 1,000 customers, comprising the world's leading agriculture, forestry, intelligence, education and finance companies and government agencies, enabling users to simply and effectively derive unique value from satellite imagery. Planet is a public benefit corporation listed on the New York Stock Exchange as PL.

To learn more visit www.planet.com.

Endnotes

Endnotes

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The ERM Sustainability Institute

The ERM Sustainability Institute is ERM's primary platform for thought leadership on sustainability. The purpose of the Institute is to define, accelerate, and scale sustainability performance by developing actionable insight for business. We provide an independent and authoritative voice to decode complexities. The Institute identifies innovative solutions to global sustainability challenges built on ERM's experience, expertise, and commitment to transformational change.

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